EASTERN RESEARCH GROUP, INC.

M E M O R A N D U M

TO: Fred Porter, U.S. Environmental Protection Agency

FROM: Lydia Evans, Susan Radomski, and Ruth Mead, Eastern Research Group

DATE: September 22, 1997

SUBJECT: Final Summary of July 22-23, 1997 Industrial Combustion Coordinated Rulemaking Coordinating Committee Meeting

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1.0 INTRODUCTION AND PURPOSE OF MEETING

The July 22-23 meeting of the Coordinating Committee for the Industrial Combustion Coordinated Rulemaking (ICCR) project was the fifth meeting of the congressionally chartered Federal Advisory Committee Act (FACA) committee. The main purposes of the meeting were to discuss and provide guidance on topics brought forward by the Process Heater, Incinerator, and IC Engine Work Groups, and to provide direction regarding next steps for the solid waste definition. Other items of business were also discussed. A copy of the meeting agenda is included as attachment 1. A copy of the attendance list for the meeting is included as attachment 2.

The remainder of the meeting summary is organized in the following sections:

12.0 Review of Parking Lot Issues
13.0 Conclusions
14.0 Discussion of Next Meeting

2.0 MEMBERSHIP CHANGES

Fred Porter of EPA reported that the EPA has received and reviewed nominations for new members and alternates to several ICCR Work Groups. Additionally, requests to withdraw Work Group membership have been received. Nominations and withdrawals are listed for each Work Group as attachment 3. The Coordinating Committee approved the nominations and withdrawals. Any additional nominations or nominations that were made but not included on the list should be submitted via e-mail to Fred Porter. He will circulate a list of additional nominees with docket numbers prior to the next Coordinating Committee meeting.

3.0 SUMMARY UPDATES

3.1 Update on TTN

3.1.1 Presentation

Lydia Evans of ERG gave a presentation on upcoming changes to the TTN. The presentation overheads are included as attachment 4. A change that will be taking place immediately is the addition of an Adobe Acrobat version of files placed on the TTN. This decision was made by EPA to resolve the issues resulting from incompatible software. Since the `ICCR bulletin board` changed from WordPerfect 5.1 to WordPerfect 6.1 to match EPA's standard, some Work Group and Coordinating Committee members have had difficulty accessing files. A reader for the Adobe Acrobat files is available free of charge, and will allow anyone to view or print Adobe Acrobat files. Adobe Acrobat files cannot be manipulated, however, and this caused some concern with Coordinating Committee members. Other avenues for communication like electronic mail may be the solution when working documents need to be transmitted.

Another upcoming change mentioned is the conversion of the bulletin boards to a new server. The telnet bulletin board system will be phased out once the new Internet-based system is

in place. This will allow links to other sites as well as improving navigation to the areas that currently exist.

3.1.2 Discussion and Public Comment

There was concern from a member of the Coordinating Committee about requiring files to be submitted in WordPerfect 6.1 correctly formatted, as the people that do not have this software will be unable to edit the file once it is saved as a WordPerfect 6.1 file. EPA will reconsider this issue.

A Coordinating Committee member requested that all documents for consideration by the Coordinating Committee at an upcoming meeting be posted together somewhere. EPA explained that there is no space available for a new area, but that a list of the needed files could be compiled and sent as a list server message. This was accepted as an improvement to the current situation of having to look on each individual board for items that need review prior to a meeting. Another Coordinating Committee member pointed out the necessity of posting items to be considered at a Coordinating Committee one week in advance of the meeting. This means the item must be submitted to EPA at least three days prior to that, i.e. no later than ten days before a Coordinating Committee meeting.

It was also pointed out once again that flash minutes of meetings are generally posted on the TTN about three days after the meeting, with draft complete minutes posted about two weeks after the meeting. There is a two-week period for comments on the draft complete minutes, and a final version should be posted about a month after the meeting.

3.2 Update on Information Collection Request

Ruth Mead of ERG gave a status update on the Information Collection Request (ICR). By the due date of July 15, 1997, roughly 8,000 of the 12,000 surveys mailed had been completed and returned. ERG is logging in the surveys in an electronic database in order to track which facilities have responded. At the same time, ERG is reviewing them to sort out (1) those that contain confidential business information (CBI) and must be treated separately according to EPA's CBI handling procedures and (2) any that may not scan correctly. The surveys will be sent to another company who will scan the surveys and produce two outputs: (1) an Access database containing the information submitted in the ICR responses, and (2) a "picture" of each survey on

CD that can be placed in the docket as a record of the actual responses. The database of survey response information can then be merged with the ICCR inventory database and released as part of version 3 or 4 of the database.

Fred Porter mentioned that he would like for version 3 of the inventory database to include ICR responses, any changes resulting from Work Group "weeding" of the database (e.g., to identify misclassified units and obvious errors), and any new information available. It is planned that version 3 will be released in October, so it is necessary for any information to be included in that release be available in Access 2.0 by the end of August.

In response to a question on the format for submitting suggested changes to inventory database entries, Ruth Mead noted that those submitting changes should use the procedures specified in the file "CHNGPROC.ZIP" posted on the TTN on the ICCR Main Menu under "Information Collection".

3.3 Update on Availability of Emission Test Database

The emission test database for Boilers, Incinerators (including flares) and turbines is currently available on those boards on the TTN.

3.4 Update on Industrial and Commercial Waste Incinerator Rulemaking

Fred Porter explained that a consent decree had been entered whereby the proposal would occur in November, 1999 and promulgation would occur in November, 2000. October 15, 1997 is the deadline for the entry of Information Collection Request questionnaire responses, and November, 1998 is the deadline for a white paper outlining options for regulating Industrial and Commercial Waste Incinerators (ICWI).

3.5 Update on the NO_x NSPS Proposal

3.5.1 Presentation

Revisions to the NO_x NSPS addressing utility and industrial boilers were proposed in the Federal Register on July 9, 1997. Fred Porter sent instructions to the Coordinating Committee on how to find and download this from the TTN. Mr. Porter pointed out that an interesting aspect of this proposal is that a single NO_x emission limit is proposed regardless of the fuel type. In the past, different emission limits have been set for different fuel types. The emission limit set was

based on a coal-fired unit with selective catalytic reduction controls. The court-ordered promulgation date for these revisions is September, 1998.

3.5.2 Discussion and Public Comment

Fred Porter stated that the NO_x NSPS are a separate, court-ordered proposal/action, and that it is not on the table for the ICCR. A Committee member asked why it was not on the table for the ICCR as she had originally thought. Mr. Porter stated that the ICCR is not a forum for discussion of the merits of the proposal. The ICCR could make a recommendation to consider the industrial part of the proposal under the ICCR, but could not be sure how EPA would react to this. In any case, the court-ordered date for promulgation would remain September of 1998. The Coordinating Committee member went on to say that she did not recall being asked for a recommendation on whether this action should be within the scope of the ICCR. She went on to say that it was decided that the ICCR would focus first on MACT, and that NSPS would be considered later. The NO_X NSPS revision occurring at this point in the ICCR is a timing problem. Finally, she mentioned that the definitions of boilers, heaters, and incinerators in the ICCR do not match those in subparts Da and Db of the proposed NO_X NSPS revisions. Leslye Fraser stated that the definitions currently being used for the ICCR are for the purpose of forming Work Groups, not necessarily for use as final regulatory definitions.

Another Coordinating Committee member stated that the Incinerator Work Group will need to have a white paper on regulatory options that includes section 129 regulations for NO_X available by November, 1998 per the ICWI litigation agreement. Because this timing will coincide with the NO_X NSPS revisions, these activities need to be coordinated. Mr. Porter agreed, and stated that the Incinerator Work Group should be working toward developing draft recommendations for the Coordinating Committee on this white paper, as EPA wants ICCR recommendations from the ICCR Coordinating Committee on incinerator regulatory options.

A member of the audience, Bob Bessette of the Council of Industrial Boiler Owners, suggested that the committee comment on the NO_X NSPS proposal, suggesting that EPA consider rolling it into the ICCR.

3.6 Miscellaneous Items

3.6.1 Updates

Fred Porter mentioned that a small business caucus had been formed within the ICCR to allow for better organization and participation among those with small business interests. He pointed out that a caucus does not have additional influence or voice within the ICCR, but that smaller groups such as small businesses and environmental organizations have formed caucuses for their own organizational benefit. EPA does not participate in these caucus meetings unless asked for the purpose of a presentation, but may help locate meeting facilities or provide a facilitator on occasion.

Mr. Porter also mentioned that a group came to EPA top management and stated a specific way that EPA should require Work Groups to develop regulatory recommendations. The EPA does not intend to do this, and expressed that this type of suggestion has no place in the FACA process. The FACA process is for all stakeholders to meet together and try to come to consensus recommendations.

3.6.2 Discussion and Public Comments

An audience member expressed concern about the definitions of boilers, heaters, and incinerators. It was his understanding that definitions were established for the purpose of forming Work Groups, but that they have not been revisited. These definitions are being used by the Work Groups to review the database and begin developing regulatory recommendations. He is concerned that if major changes are made to the definitions this may be wasted effort. A Coordinating Committee member commented that although the EPA can not currently accept these preliminary definitions as final regulatory definitions, EPA (or other members) should be able to express any major concerns over the working concepts of these definitions. Any concerns should be brought forward now, as these definitions will form the heart of future Work Group and Coordinating Committee recommendations.

4.0 WORK GROUP STATUS REPORTS

4.1 Discussion and Public Comment

The Work Group status reports are included as attachment 5, and only specific questions or comments on the status reports were discussed.

A question was raised as to why the Turbine Work Group status report stated that good operating practices may not apply. These may not apply solely, but he does not want to see these discarded at this early date. A Turbine Work Group member explained that some practices were intuitive and do not need to be spelled out in a regulation. In response to a question about whether everyone would know how to operate correctly, another Work Group member stated that quantification of the impact of good operating practices was difficult. With regard to the "short list of HAP's" mentioned in the Turbine status report, a Coordinating Committee member expressed an interest in seeing the list. It was explained that the Turbine Work Group would be discussing this list Friday morning in the Turbine HAP technology session, and that they will have some experts on HAP emissions in attendance.

A comment was made that the Incinerator Work Group needs to move ahead with subgroup activities and the white paper.

A member of the Testing and Monitoring Protocol Work Group added that two documents had been released by them, one on formaldehyde issues and one on the costs of testing.

Fred Porter stated that in the IC Engine Work Group status report, it was mentioned that funding would be requested from EPA. He urged the Work Group to consider other sources of funding as well.

Fred Porter also mentioned that he did not see dates in the status reports for completing the review of the inventory database to identify misclassified units and obvious errors. He asked that the Work Groups wrap up these activities by the end of August so that version 3 of the database can be issued in October. It was clarified that the correction of SCC codes is an important part of this review so that units can be correctly sorted electronically and assigned to the appropriate Work Group.

Mr. Porter also stated that some of the Work Groups mentioned concerns that the inventory database must be absolutely accurate, where other Work Groups saw it as a starting point. EPA shares the view that it is a starting point for preliminary conclusions, and this information will be supplemented by additional expertise in rule development. Another Coordinating Committee member stated that the incinerator inventory database may not be

complete enough to use as an estimate of the number of units. Mr. Porter explained that the current database is probably the most extensive database EPA has had and expressed the need to work with what is already there and what is possible to get. Gaps in the data should be identified and filled as much as possible, but some assumptions will need to be made in order to proceed.

One Coordinating Committee member questioned whether voluntary data provided by interest groups could be used. Fred Porter answered that voluntary data would be used to supplement the current inventory database, and if it is received before the end of August, it can go into version 3 of the inventory. Voluntary data will be accepted after August, but will most likely not make it into version 3.

During the public comment period, Jeff Shumaker, of International Paper mentioned that the blending of the survey responses with the current inventory database is a major part of the process, as the surveys should provide better quality information.

A State representative on the Coordinating Committee mentioned that more recent emission test data should be requested from the states. Fred Porter suggested that the state representatives on the ICCR try to find out what is available. A public commenter, Dr. David Marrack of The Galveston-Houston Association for Smog Prevention expressed concern that the current database will not be able to address the section 112 requirement to consider process changes to reduce emissions. Mr. Porter stated that one of the benefits of the ICCR is the ability to draw in expertise for such issues.

4.2 Direction to Work Groups

The Coordinating Committee agreed to provide guidance to the Work Groups to complete their initial review of the database and identify suggested changes by the end of August. There may be additional efforts necessary once the surveys have been completed, but as much as possible should be completed by the end of August.

5.0 REPORT ON ECONOMICS INCENTIVES FACA

5.1 Presentation

Three goals of the Economic Incentives FACA were mentioned by Steve Gerritson in his presentation; to identify existing ideas and processes, to research implemented programs, and to

provide recommendations to the Administrator. He stated that this committee started with a literature search on programs and ideas for economic incentives. Then state and local air agencies were surveyed to find innovative programs that have been implemented. They plan to survey industries on problems encountered with innovative programs, as well as how an economic incentive program could work. Finally, a list of recommendations could be provided to EPA describing economic incentive programs and how they might be implemented.

Three possible incentive types given consideration by the committee were emissions trading, tax incentives, and systemic changes. Guidance for open market trading has been worked out through this process. Tax incentives could be in the form of parking taxes, variable tolls based on time of day, or a program for variable costs to register a car based on certain factors. Systemic changes would be something like California has done with the "Clean Communities Program", where the community is designed with cleaner air in mind, or other voluntary programs.

Industry surveys are being designed, but have not been distributed. Case studies in the three areas listed above for economic incentives are being prepared. Mr. Gerritson went on to say that these ideas are based on the theory that people react rationally, but there is a poor understanding of what constitutes an economic incentive. For example, variable tolls have not worked because an increase of a few cents isn't enough of an incentive. It would take larger financial incentives to cause people to switch modes of transportation. One case study is a voluntary proposal that has been developed that would allow people to have their cars tested and repaired for a nominal fee. Emissions reductions gained would be sold to interested buyers, and this would pay for the repairs. It is necessary to get EPA to endorse the surplus nature of these reductions in order to start this program. Concurrence has already been given by two EPA regions.

A final report including case studies will be released by the Economic Incentives FACA group this fall, and will be available to anyone interested.

5.2 Discussion and Public Comment

A Coordinating Committee member mentioned interest in incorporating data from these industry surveys into the ICCR database if any industries are identified that have implemented

programs that reduce emissions because of economic incentives. This member also requested that input on questions for the industry survey be allowed from the Coordinating Committee. Mr. Gerritson said that Coordinating Committee members could have input, and that he would also like to coordinate efforts. He noted that the survey will be sent to a sample of probably 100 to 150 industries.

Another Coordinating Committee member asked if this FACA has considered economic incentives for toxics, as most programs to date have been for criteria pollutants. Mr. Gerritson responded that these are being investigated. Another Coordinating Committee member commented that the group should investigate "supplemental environmental projects" where monetary penalties assessed for violations of standards are applied to projects that reduce emissions below what the standard would require. Several industries in EPA Region V have implemented pollution prevention projects under this program.

During the public comment period, Dr. David Marrack said that in considering programs to reduce vehicle pollution, it is important to realize that old cars are not the only problem. Approximately 5 to 10 percent of new cars have high emissions, and diesels emit much more than standard cars.

6.0 REPORT FROM THE SOLID WASTE DEFINITION SUBGROUP

6.1 Presentation

John Ogle gave a presentation based on the subgroup report posted on the TTN. This presentation is included as attachment 6. The subgroup suggested forming a new solid waste definition subgroup, composed of representatives of various work groups and a balance of stakeholder interests. The recommended mission and starting points for the new subgroup are discussed in the attachment. EPA recommendations for members of this subgroup were distributed by Fred Porter, and are also included in attachment 6.

6.2 Discussion and Public Comment

A Coordinating Committee member had it confirmed that the reference to solid waste and/or non-fossil fuel referred to solid waste and solid non-fossil fuel. Another member asked why the definition was starting with part 260 or 261 (hazardous waste) rather than part 257 (solid

waste). Fred Porter responded that EPA felt strongly about using part 261 as a starting point, because it is the only place EPA has amplified on the term "discard". Amplifications on this term are essential to flesh out the statutory definition. The statutory definition talks about anything discarded but doesn't define discarded. The EPA has spent years developing a hazardous waste definition, and this invested effort should be used as the starting point. The final result could be substantially different, but there will need to be a rationale for these differences that includes why they are needed and how they make sense for section 129.

Mr. Porter went on to mention that for the ICCR there is an immediate concern with section 261 in that part of the definition of "discard" is that anything burned is by definition "abandoned" and "discarded" and is therefore considered to be a waste. The EPA realizes this part of the term "discarded" will likely need to be changed for the purposes of section 129, but a clear rationale will be necessary.

Some committee members expressed concern about using section 261 as a starting point for various reasons. One felt that it was developed in the context of hazardous waste and is not useful for combustion of nonhazardous waste. Another suggested starting with a clean slate rather than a definition of discard that will be problematic for the ICCR. Another member agreed with Mr. Porter that the group cannot ignore what has already been published on the term "discarded" in part 261. There is a need to justify differences, or it will create questions and confusion. Mr. Porter reiterated that using part 261 as a starting point does not mean it will be the ending point--EPA is not intending to bias or pre-judge the final conclusion. In response to a Committee member's question on whether EPA can adopt a definition for purposes of section 129, Mr. Porter replied that EPA has concluded that a definition has not been adopted for solid waste that is specific to section 129 non-hazardous waste under RCRA. The EPA has the flexibility and authority to develop a definition for non-hazardous solid waste.

Several Coordinating Committee members expressed the need to get the definition established as quickly as possible, as Work Groups are dependant on it.

A member of the audience, Mr. Barton Day, representing U.S. Sugar Corporation, stated that section 261.2 amplifies on discarded, but not in the context of combustion. It simply says that anything that is combusted is a waste. Therefore, he does not see this as a useful starting

point. Previous efforts to clarify "discarded" in the context of combustion have gotten nowhere. He suggested that it would be easier to get consensus on regulatory results rather than regulatory definitions. Another public commenter, Mr. Bob Bessette of the Council of Industrial Boiler Owners noted that the process outlined is good and the subgroup should move forward as quickly as possible. However, he disagreed with using part 261 as a starting point because it could contribute to the misperception that all waste is hazardous. Jeff Shumaker of International Paper commented that he had been an alternate on the subgroup and agreed with the subgroup recommendations, because the ending point is not constrained as long as there is a rationale for differences.

Leslye Fraser of EPA clarified that EPA is willing to take recommendations on the definition of waste, but that EPA will make the final decision. A Coordinating Committee member mentioned that the Work Groups may use the recommended definition before a decision is made by the Administrator, and this may cause problems. Mr. Porter responded that since EPA is a member of this FACA, they will provide feedback as the group progresses toward a recommended definition.

A Coordinating Committee member asked what happened to the proposed definitions of solid waste that were submitted to the subgroup. He also stated that the combustion equipment and the production of air emissions need to be considered, not just the fuel type. Fred Porter responded that several people have sent in suggested definitions and that these will be given to the new solid waste definition subgroup for their consideration.

Mr. Porter presented and discussed reasons for EPA's recommendations for subgroup members. These recommendations for members meets the proposed criteria for the number of people from each Work Group and the balance of stakeholder interests. Mr. Porter encouraged that the meetings of this subgroup be open to the public. A Coordinating Committee member mentioned that a federal agency representative was not noted, but that a federal agency observer could be designated to attend the meetings and follow the progress of this subgroup.

6.3 Decision

The Coordinating Committee reached consensus to establish a solid waste definition subgroup based on the essence of the five recommendations described in the subgroup's paper to

the committee (attachment 6). The subgroup is to attempt to develop recommendations on the definition of solid waste by the September Coordinating Committee meeting. If this is not achievable, they should present a status report in September and recommendations at the November meeting. Members of the subgroup are: David Cooper, Jim Eddinger, Chuck Feerick, Frank Ferraro, Mike Fisher, John Ramsey, Marvin Schorr, Jeff Shumaker, Mike Soots, Dick Van Frank, and Jane Williams.

7.0 BUDGET SUBGROUP REPORT

Fred Porter gave a report on the budget subgroup. This report is included as attachment 7. He pointed out that although actual spending is below the projected line, he does not expect this to continue with the large effort required for the surveys.

8.0 RESULTS OF SECOND COORDINATING COMMITTEE MEETING IMPROVEMENTS SURVEY

Responses to the second Coordinating Committee meeting improvements survey provided the following feedback:

- Members like the green and red dots on the name cards.
- The amount of time allotted to agenda items and time management is generally appropriate.
- Greater clarity of agenda items is needed, and more time may be needed for some agenda topics.
- Members like the use of the “parking lot” for issues needing further attention, however, the issues need to be more visible, need to be tracked better, and need to have adequate time allocated to address them.
- Meetings are generally well done.

- Items are usually well-framed for discussion.
- Reliance on WordPerfect 6.1 inhibits information transfer.
- Live drafting of documents via computer with projector screen is helpful.
- More intervention is needed to keep the group on schedule.
- Need to provide extension cords for laptops.
- Post on the TTN a single list of items for each meeting so that members know what to download and bring to meetings.

A Committee member suggested that the Coordinating Committee should be more of a strategic planning group. The Committee should identify milestones that need to be met and determine how to keep the Work Groups moving to meet the ICCR's long range goals, rather than spending most of the meeting time responding in detail to whatever the Work Groups bring forward.

Keystone will attempt to incorporate these suggestions in planning and conducting future meetings. See section 3.1 for actions to be taken regarding WordPerfect 6.1 and lists of meeting items on the TTN.

9.0 PROCESS HEATER WORK GROUP PRESENTATION OF PERF DATA

9.1 Work Group Presentation

Lee Gilmer gave a presentation on the Petroleum Environmental Research Forum (PERF) and field test data for indirect fuel-fired process heaters and boilers. An outline of the information presented is included in attachment 8. The studies brought four findings to light:

1. Organic HAP emissions from gas-fired boilers and process heaters are near or below detection limits;
2. Organic HAP emission factors for boilers and process heaters fired by natural gas and process gas are similar on a Btu basis;
3. Organic HAP emission factors for boilers and process heaters are equivalent;

4. Organic HAP emission factors for boilers and process heaters with and without NO_x emissions controls are equivalent.

The figures in attachment 6 present data leading to these findings. An additional finding is that elevated HAP emissions occur only under extreme operating conditions associated with poor combustion. These operating conditions are not considered safe or good operating practice within the industry.

The Work Group also informed the Committee of a preliminary finding for the MACT floor for indirect gaseous fuel-fired process heaters. The ICCR Inventory Database shows 50 percent of the process heaters listed to have controls. However, none of the indirect gaseous fuel-fired heaters had any controls except NO_X controls, and the Work Group knows of no controls for these units other than NO_X controls. Since NO_X controls do not appear to affect HAP emissions, this indicates essentially no HAP controls. The floor for indirect gaseous fuel fired process heaters would therefore be no control except good operating practices.

9.2 Discussion and Public Comment

Several members of the Committee expressed appreciation for the data provided. Several questions were raised in an attempt to verify the applicability of the data. A Coordinating Committee member asked if the size of a unit changed its emissions. Work Group members assured him that emission rates are similar on a lb/million Btu emission rate basis regardless of unit size, but the total amount of emissions (lb/yr) would be higher for a larger unit. The emission rate information presented is based on actual operating rates of both low NO_x and conventional burners during the testing. An environmental representative questioned how representative the data is of refineries nationwide, since it all comes from PERF or California refineries. Others concurred that this is an important question. He also asked if the variance of the heating value influences emissions. Work Group members replied that while the heating value varies due to differences in chemical constituents, data results show these differences do not influence emissions on a lb/million Btu basis.

A Committee member asked if the field data was collected using CARB or EPA test methods. The Work Group responded that while CARB methods were used, they are generally similar or equivalent to EPA test methods. Also, the EPA had adopted the CARB PAH method

as an EPA method. For other pollutants, details of methods may be a little different although they use the same basic chemical principles.

Jane Williams, a member of the Process Heater Work Group discussed some concerns with the data, such as which 55 of the 189 HAP's were researched and why. She also questioned the propriety of using data that has not been make publicly available.

A State agency representative on the Coordinating Committee asked why metals were not considered and noted that field gas or process gas may contain mercury. Mr. Gilmer responded that the study focused on HAP's that are influenced by the combustion process. If metals are present in the fuel, they will be emitted and the combustion process will not change their amount. Fuel analysis would be a less expensive way of determining if metals would be emitted.

An environmental representative asked if any assays were done to investigate chlorine in refinery gas and if the tests were conducted on facilities found in the ICCR Inventory Database. Work Group representatives answered that the studies were conducted on units which submitted test information to local California air regulatory agencies and the tests did not look for chlorine. They noted that one would not expect chlorine to be present in refinery process gases because it would damage equipment and interfere with refinery processes.

During the public comment period, Mr. Greg Karras, of Communities for a Better Environment, raised a question about the willingness of the industry to accept a "no dioxin" regulation. He commented that refineries burn complex mixes of fuels and by-products and that chloride ions are generally removed by desalting at the beginning of the refinery process, but not all the chloride is removed. Mr. Karras said that public tests have shown dioxins in various refinery processes. Process Heater Work Group members responded that while the industry is fairly sure that there is very little or no chlorine in the gases, dioxins have not been tested. In response to a request from a Coordinating Committee member for Mr. Karras to provide the dioxin data he referred to or specific references, Mr. Karras provided the information in attachment 9.

During the public comment period, Dr. David Marrack an environmental representative, questioned the data presented. He pointed out that no test methods were discussed. Also, no chlorine or mercury studies were conducted. He also commented that complete PAH's were not

measured because they can be bound into fine PM emissions. Work Group and Coordinating Committee members responded that the sampling and analytical methods included both particulate and volatile PAH's, however, particulate matter was not present in most cases, except when inefficient combustion took place. The latest analytical equipment which can measure PAH in the parts per quadrillion range was used.

Ruth Mahr, an environmental representative who spoke during the public comment period, suggested that a standard needs to be set for the submission of voluntary data. Private data may tend to suggest that the industry in question does not need to be regulated, and the quality of the data needs to be verified. An EPA representative expressed concern that laying out a specific standard which all information must meet would be difficult because the information will vary depending on the use for which it is being gathered. The Coordinating Committee had discussed this topic at an earlier meeting and determined that requirements that apply to all cases could not be made. However, it is important for emission data to include information on test methods and procedures.

A Process Heater Work Group member reiterated the fact that the data presented should be made public. She noted that regardless of whether an industry, State, or environmental organization submits data, it must be good quality to be used. A Committee member agreed and questioned the EPA on its support of the data presented. The EPA pointed out that EPA was involved in the quality assurance and quality control procedures of the study presented and believed the study to be of high quality. The Work Group members representing those who performed the PERF study agreed to try to gain release of the PERF data. They will need to obtain a unanimous decision among all study participants in order to release the data in less than 3 years because of the constraints of the Cooperative Research Act. The presentation lists 15 references that are in the public domain already and include information on test methods. Farhanna Mohammed, of The City of Los Angeles Bureau of Sanitation commented that releasing study results without showing the methods and procedures used to obtain them can be dangerous. She suggested that a list of the HAP's be prepared and a paragraph about why each was or was not studied be made available as well.

An environmental representative expressed concern that refinery gas had been compared to natural gas by the Work Group. He believed this was not necessarily shown by the data. A Work Group representative, on the other hand, disagreed with a statement that had been made about landfill gas being similar to refinery gas. It was pointed out that landfill gas is a product of decomposition while refinery gas is a product of a specific process. During the public comment period, a member of the Incinerator Work Group mentioned that landfill gas flares are being actively investigated and any information about landfill gas would be appreciated by the Incinerator Work Group.

A Committee member noted that the study involved stretching the operating procedures to find conditions that cause high HAP emissions. He asked if operating practices were found to impact the emissions. The Work Group representatives agreed that operating procedures had an effect on emissions and would be considered as part of the MACT floor. An environmental representative agreed that operating practices and process changes should be considered in establishing the floor, especially if the floor currently involves no controls. An industry representative disagreed with the idea that anything besides control devices could be considered when establishing a MACT floor.

A public commenter, Tim Hunt, of the American Petroleum Institute, noted that the data presented is for a small part of one source category (indirect gaseous fuel-fired process heaters). There are many other source categories and subcategories that ICCR must consider. The Work Groups and Coordinating Committee will need to get information on what is known about all of the categories so that they can determine the most important concerns and questions to answer overall.

A Coordinating Committee member representing State/local agencies remarked that the study provided good information. He suggested that the Committee needs to focus on the biggest problems, such as incinerators and solid wastes, which may be of more concern than natural gas. Another Committee member agreed, but pointed out that questions about pollutants such as chlorine and dioxins are significant.

Another Committee member suggested that the Committee define the specific questions they would like the Process Heater Work Group to answer to address the various concerns raised by Committee members and the public.

9.3 Coordinating Committee Direction to the Process Heater Work Group and Other Work Groups

After discussion, the Coordinating Committee reached concurrence on the following direction to the Process Heater Work Group:

1. Data
   - Make data open and publicly available.
   - Provide detail on test methods so their adequacy can be assessed.

2. How representative were the facilities tested? (e.g. West, Midwest, East)

3. Identify and explain why certain HAP's were and were not examined. Identify organic and inorganic HAP's as fuel constituents and HAP emissions. Are there HAP emission effects caused by process equipment and control devices, if present, on indirect-fired process heaters?

4. Identify the HAP's of interest resulting from input trace constituents such as chlorine and mercury.

The Coordinating Committee requested the Process Heater Work Group to report back on these questions at future Coordinating Committee meetings.

The Committee also provided guidance that other Source Work Groups should consider the same questions in assessing and bringing forward other data.

10.0 INCINERATOR WORK GROUP PRESENTATION OF ITEMS NEEDING COORDINATING COMMITTEE GUIDANCE

10.1 Work Group Presentations

Norman Morrow presented the scope and prioritization process of the Incinerator Work Group. Anthony Licata and Andy Roth also presented prioritization recommendations for two of the Work Group Subteams. Consensus on the topics presented was obtained by the full Incinerator Work Group. All three presentations are included as attachment 10.

Mr. Morrow explained that five subteams within the Incinerator Work Group address specific groups of incinerators. As outlined in the attachment, each subteam distinguishes which incinerator types should be given priority attention by asking the following questions:

1. Is this incinerator type subject to section 129?

2. Does it include significant, unregulated combustion sources of HAP, thereby justifying development of a section 112 standard?

3. Does it include significant, unregulated combustion sources of criteria pollutants, thereby justifying development of a section 111 standard?

If the answer to all three questions is "no" for any equipment type, that equipment should not be given priority by the Work Group.

Mr. Licata, a member of Subteam 2, which has been charged with looking at incinerators burning materials such as chemicals, petroleum, off-gas, and soil, suggested that priority be given to combustion devices which burn halogenated off-gas. Mr. Roth discussed the sources involved in metals-, rubber- or glass-related incineration. The Work Group's recommendations in relation to these sources was that: Combustion for the primary purpose of metals recovery would be regulated under section 112, pursuant to its exemption under section 129; that the Work Group will do no further work of secondary aluminum or secondary lead because these are covered by other MACT standards; and the Work Group will collect data on burn-off ovens, which would be covered under section 129.

10.2 Discussion and Public Comment

A Coordinating Committee member pointed out that while he believes that thermal oxidizers are not incinerators, he is uncomfortable with the idea of not addressing them. He went on to say that he believed the processes that use thermal oxidizers should be regulated. The Work Group representatives responded that it will not ignore sources that have not been given priority. Many of these sources are already covered by separate MACT's, and while halogenated sources will be focused on first, other sources can be considered.

Another member of the Coordinating Committee asked how the Work Group will decide if the "primary purpose" of an incinerator is metal recovery. The Work Group responded that

while the definition of "primary purpose" is still being investigated, the current working definition hinges on whether or not the material is being combusted for the value of the metal. An EPA representative pointed out that there is no formal definition of "primary purpose." However, in the current scoping mode of the Work Group, common-sense may be used. As the process of actual regulation begins, the EPA may need to consider whether a specific regulatory definition is needed.

Several Coordinating Committee members agreed that prioritization within the Source Work Groups is a good idea and discussed creating a formalized prioritization method. Several Coordinating Committee members liked the prioritization scheme used by the Incinerator Work Group and reminded the Work Group to keep the Coordinating Committee informed of policy decisions. Furthermore, if a Work Group decides not to consider some categories or individual sources because they meet the definition of units being addressed by another Work Group, the Work Group needs to make sure that these sources are passed on to the proper Source Work Group for consideration. The EPA reminded the Work Groups that a proper method for transferring units to other Work Groups exists and should be used. Also, the EPA stressed that nothing is actually "eliminated" from the database, but is merely transferred between Source Work Groups due to definitions of Work Group equipment. An Incinerator Work Group member pointed out that for the purpose of categorizing, units covered by MACT standards that are already in place or under development, such as secondary lead and aluminum recovery units, will not be considered by the Incinerator Work Group or other Work Groups.

An environmental representative suggested that when deciding if emissions are "significant", the Work Group consider environmental justice issues. The placement of sources may determine if a source is significant. The Work Group stressed that the term "significant" was meant to be all-encompassing and relevant factors would be considered.

The Coordinating Committee again stressed the importance of communication between the Source Work Groups and the Coordinating Committee. The Coordinating Committee requested a table of categories from the Work Groups. Specifically, a column showing the units that have been transferred to another Work Group and the reason for this transfer should be included. Also, a column showing the priority level of the category and the reason it falls into the

given priority level would also be helpful. Any exemptions should also be shown with the corresponding reason for the exclusion.

During the public comment period, David Marrack supported the idea of a table of categories. He also requested that the EPA clarify the method that will be used to coordinate the wide range of current MACT's with the ICCR. Jane Williams suggested that the Incinerator Work Group needs to address the dioxin issue. She asked when low priority items will be considered. In response to her question about dioxins, Tony Licata offered to make available to the Coordinating Committee a summary of a German paper showing the mass balance of dioxins in order to illustrate where these compounds originate. Frank Caponi mentioned that the adequacy of the data in the German paper needs to be determined. Others suggested information on dioxin formation mechanisms and emissions would be useful. The EPA agreed to investigate whether a dioxin primer can be provided in conjunction with a future meeting. A group composed of Tony Licata, Fred Porter, Greg Adams, Dick Van Frank, and Rich Anderson will discuss and figure how best to make a presentation on dioxins.

10.3 Coordinating Committee Direction to the Incinerator Work Group and Other Work Groups

After discussion, the Coordinating Committee reached concurrence on the following prioritization issues of the Incinerator Work Group:

- The Incinerator Work Group will focus on data collection for HAP's from halogenated gases under section 112, while non-halogenated gases will be low priority.

- The Incinerator Work Group will collect data on burn-off ovens, which would be covered under section 129; combustion for the primary purpose of metals recovery would be regulated under section 112, pursuant to its exemption under section 129; the Work Group will do no further work on secondary lead and secondary aluminum because these are covered by other MACT standards.

The Coordinating Committee encouraged other Source Work Groups to identify and prioritize their activities and communicate these priorities and supporting rationale to the Committee.

11.0 INTERNAL COMBUSTION ENGINE WORK GROUP PRESENTATION OF ITEMS NEEDING COORDINATING COMMITTEE GUIDANCE

11.1 Work Group Recommendations

Sam Clowney presented information about the Reciprocating Internal Combustion Engine (RICE) Work Group plan for emissions testing. The presentation is included as attachment 11. The Work Group presented a list of pollutants to be tested and requested Coordinating Committee guidance on this list. The pollutant list will be one element of a test plan the Work Group plans to develop. The proposed five part test plan may be presented to the Coordinating Committee at the September meeting.

11.2 Discussion and Public Comment

A Committee member commented that the database of 28 test reports is very limited. He expressed concern that the HAP's that were not included in the list of 39 HAP's in the RICE emissions database may actually be present. Another Committee member pointed out that the number of reports is more than is available for most ICCR subcategories. It was suggested that mercury be added to the list because it is present in landfill gas as shown by Fresh Kills and EPA data. Dick Van Frank agreed to provide references for this data. Another Committee member suggested obtaining EPA's Mercury Report to Congress. He noted that mercury exists in multiple forms, and the form is a concern from the health effects standpoint. Total halogen testing was also suggested, as it is not too expensive. The RICE Work Group representative also noted that dioxin is not on the list, but the Work Group is looking into whether it could reasonably be expected.

Another Committee member pointed out that in two instances, all the pollutants tested were present. He is concerned that other pollutants are present as well. The EPA pointed out that while the pollutants on the list are pollutants for which testing is recommended, it has not yet been determined which pollutants will be regulated. Also further pollutants may be added to the list for testing. The EPA went on to explain that where other MACT standards currently under development outside of the scope of the ICCR focus on reducing the emissions of HAP's present in a gas stream prior to the use of any add-on emission control--such as combustion control--the ICCR should be concerned with HAP products of combustion, not HAP's found in the gas stream

prior to combustion control. An environmental representative pointed out that coal also contains mercury, which should therefore be considered by ICCR. The EPA agreed.

A Committee member asked if criteria pollutants, such as PM 2.5, NO_x, and CO would be tested simultaneously with HAP's. He suggested that side-by-side testing would be useful for identifying possible surrogates. Another Committee member strongly agreed and added that such testing could be important for determining the relationship between NO_x, PM 2.5, CO and HAP emissions. The Work Group representatives responded that to their knowledge there is no EPA Reference Method for PM 2.5; simultaneous testing of NO_X and CO is being considered, but is more expensive. The Committee member suggested that Work Group be directed to perform simultaneous NO_X emission testing with any HAP emission testing.

Several Committee members indicated they agreed with the Work Group representative that there was no EPA Reference Method for stack testing to measure PM 2.5. Several Committee members also suggested that rather than direct the Work Group to undertake simultaneous testing in all cases, that the Work Group be directed to address the relationships between NO_X, CO, and HAP emissions and report back to the Committee with their plans for doing so. The EPA suggested the Committee direct the Work Group to consider simultaneous NO_X emission testing, but not direct the Work Group to undertake simultaneous testing in every single case, regardless of circumstances; it was more appropriate to direct the Work Group to address an issue, such as the relationship between NO_X, CO, and HAP's, and report back to the Committee with plans to do so, than to direct the Work Group to undertake specific actions to address an issue without the opportunity for the Work Group to consider how best to address the issue.

Another Committee member pointed out that chlorinated compounds were found in one of the source tests. The Work Group believes that the sample may have been contaminated. A member asked if there was any indication of relative risk associated with the various fuel types based on pollutants present and the quantities. The Work Group did not have the information to complete this analysis. Instead, the Work Group planned to test for any pollutant that had been detected. Also, a literature search for dioxins is being conducted and the results will be brought before the Coordinating Committee at a later date.

The Work Group developed the list of RICE pollutants by considering the pollutants tested for and detected in the 28 test reports in the RICE database, and comparing these to the list developed by the California Air Resources Board (CARB) and the Testing and Monitoring Work Group list of HAP's likely to be emitted from RICE using natural gas and diesel. Concern was expressed that the Testing and Monitoring Protocol Work Group list of pollutants is shorter than the CARB list, implying that the pollutant list given to other Source Work Groups may also be incomplete. A Coordinating Committee member who represents the Testing and Monitoring Work Group pointed out that their list is intended as a starting point only, not an ending point. A Committee member asked if the Work Group had assessed the rationale CARB had used in creating the list. A Work Group member who is part of the California Air Agency pointed out the CARB memo in the attachments and offered to see if more documentation could be found on the list selection. A Coordinating Committee member mentioned that the CARB effort included public hearings and guidance documents in developing the list. The data takes chemical properties into account as well. For instance, if a chemical is not water soluble, it cannot enter a digester gas stream. Also, this inventory is updated every two years. She does not think the ICCR can reinvent the entire project. An environmental representative pointed out the usefulness of documenting this selection of HAP's. The EPA agreed that RICE should understand the rationale behind the CARB list, but that this is not the sole reason for narrowing the list.

During the public comment period, Farhanah Mohamed, who is a member of the Testing and Monitoring Protocol Work Group, pointed out that the City of Los Angeles has done exhaustive research and testing on the topics being discussed. The research resulted in a list of fourteen pollutants approved by CARB for digester gas, along with dioxins and PAH's. However, metals have not been found in this testing, nor have dioxins or mercury been found in large amounts.

A Committee member asked if testing of natural gas and propane is a priority. It was mentioned that AP-42 emission factors for gas are much lower than for other fuels. When total emissions are measured, even for large engines, these fuels will likely be considered a low priority. Another Committee member noted that engine operating rates may also prove to be important. More NO_X emissions are present when an engine operates at 80 percent load than at 100 percent.

During the public comment period, David Marrack commented that lubricating oil can add pollutants to diesel emissions. He also expressed concern about PM 2.5 and chlorinated hydrocarbon emissions from diesel burning engines. He suggested that studies conducted by General Motors and Sweden be consulted to determine if the information would be applicable to the ICCR.

A representative from API discussed the issue of testing cost. API is conducting research which will be useful to the Reciprocating IC Engine Work Group. Testing many engines is most desirable, but fewer can be tested if more pollutants are added to the list. The Work Group representative pointed out that the HAP list presented represented only one component of a five component test plan the Work Group plans to develop. Additional testing will be expensive because it involves a matrix of conditions with multiple runs. The Work Group can cost out the addition of pollutants to the list and give the results to the Coordinating Committee.

A Coordinating Committee member expressed concern that the Committee was second guessing the Work Groups throughout the discussion. The Reciprocating IC Engine Work Group had not only done as it was directed, but had gone beyond those directions and consulted other Work Groups and a state with extensive toxics knowledge. He believes that the Work Group recommendation should have simply been approved subject to additional study of the questions raised by the Committee. Another Committee member agreed that the discussion was an attempt to micro-manage the Work Group and was unnecessary and unreasonable. Other Committee members pointed out that additional expertise may be present in the Coordinating Committee and constructive criticism should be appreciated by the Work Groups.

11.3 Coordinating Committee Direction to the Reciprocating IC Engine Work Group and Other Work Groups

The Coordinating Committee directed that the RICE Work Group continue working on the other portions of the test plan for the RICE proposed list of pollutants. Individual members suggested that the Work Group consider dioxin, mercury, and criteria pollutants, and that ICCR participants be given an opportunity to make suggestions to the Work Group. The HAP list and test plan issues should be revisited at a future meeting.

A Committee member noted that products of incomplete combustion will be common across multiple types of combustors and fuels, and will be important for all Work Groups to consider. The Coordinating Committee asked the Testing and Monitoring Protocol Work Group to produce a white paper on the products of incomplete combustion.

12.0 REVIEW OF PARKING LOT ISSUES

Several topics have been mentioned or partly discussed at previous Coordinating Committee meetings. Some of these issues have been addressed and some have been held over in the "Parking Lot" for future Committee meetings. The following lists identify previous and current "Parking Lot" issues:

Issues from Previous Meetings Addressed at the July 22, 23 Meeting:

- Economic Incentives and Regulatory Strategies. During discussion with EPA Assistant Administrator Mary Nichols at the January meeting, a presentation of innovative control strategies and techniques was suggested. STATUS: Steve Gerritson presented information from the economic incentives and regulatory strategies FACA at the July 22 Coordinating Committee meeting.

Issues Held Over for Future Meetings

The following items have been in the Parking Lot since the January or March meetings, and activity is ongoing.

- Process Heaters Regulatory Overlap Issues. At the March meeting, the Coordinating Committee asked EPA to investigate whether other MACT standards will regulate the types of process heaters listed on Tables 2 and 3 of the Process Heater Work Group status report presented at that meeting. EPA is in the process of doing this and will report back to the CC in the future. STATUS: There is ongoing EPA activity.

- Other Regulatory Programs that may Impact the ICCR. Members requested information on various activities (e.g., EPA's Utility Air Toxics program, boiler

NOx NSPS, NAAQS, OTAG, etc.) and updates on the findings of the Specific Pollutant, Urban Air Toxics, and Great Waters Programs as these efforts progress so that the committee can consider consistency among related programs. STATUS: A brief presentation on the NO_x NSPS was made on July 22, 1997. A presentation on Urban Air Toxics and Great Waters was made at the May Coordinating Committee meeting. There is ongoing EPA activity in these areas.

- Executive Orders to be considered during the ICCR. STATUS: A primer may be given at a future meeting of the Coordinating Committee if EPA staff are available.

- Small Business issues dictated by the Small Business Regulatory Enforcement Fairness Act (SBREFA). STATUS: A small business caucus has been formed.

<u>New "Parking Lot" Issues and Number of Coordinating Committee Members Interested in Discussing</u>

The following issues were raised and briefly discussed at the July 22 and 23 meeting and have been added to the "parking lot" to address in the future. A show of hands was taken to indicate which issues Coordinating Committee members most wished to discuss in the near future.

- Relationship between NO_x NSPS proposal and the ICCR. This is a more specific point under the second bullet in the previous section. The NSPS was recently proposed and the comment period closes in September. Members were interested in whether and how to coordinate the industrial boilers portion of the NSPS with the ICCR. Five members saw this as the most important parking lot issue to address in the near future.

- Industrial and Commercial Waste Incinerator (ICWI) white paper on regulatory options. EPA is required to produce this white paper in November 1998 as part of an agreement on the ICWI litigation. The Committee directed the Incinerator Work Group to begin developing draft recommendations to the Coordinating Committee. The Committee would discuss such recommendations and then make recommendations to EPA on the content of the white paper. Seven members wished to discuss this issue in greater detail in the near future.

- Legal issues about inclusion of work practices and operating practices in the MACT floor and MACT standards. During discussion of Work Group reports, questions were raised to EPA on these issues. Nine members saw this as the most important parking lot issue to address in the near future.

- Hazardous Air Pollutant lists. During discussion of the RICE proposed list of HAP's for testing, questions arose on coordinating development of HAP lists by other work Groups. Thirteen members saw this as an important issue to address in the near future.

- Criteria for submitting emission data. During discussion of the PERF data, a suggestion was made to consider criteria for submitting emission data for use in the ICCR. Others noted that the Committee has previously discussed this issue. Three members wished to address this issue further in the near future.

13.0 CONCLUSIONS

- The Coordinating Committee approved the Work Group membership additions and changes recommended by EPA.

- The Coordinating Committee directed the Source Work Group to complete their initial review of the ICCR inventory database for misassigned units and obvious errors by the end of August.

- The Coordinating Committee established a solid waste definition subgroup to develop recommendations on a definition of solid waste for purposes of section 129 of the Clean Air Act. The subgroup is to attempt to develop recommendations by the September Coordinating Committee meeting. Members

of the subgroup are: David Cooper, Jim Eddinger, Chuck Feerick, Frank Ferraro, Mike Fisher, John Ramsey, Marvin Schorr, Jeff Shumaker, Mike Soots, Dick Van Frank, and Jane Williams.

- Members of the Process Heater Work Group gave a presentation on the PERF and field test data for indirect gaseous fuel-fired process heaters and boilers. The Coordinating Committee provided the following guidance to the Process Heater Work Group:

  1. Data
     - Make data open and publicly available.
     - Provide detail on test methods so their adequacy can be assessed.
  2. How representative were the facilities tested? (e.g. West, Midwest, East)
  3. Identify and explain why certain HAP's were and were not examined. Identify organic and inorganic HAP's as fuel constituents and HAP emissions. Are there HAP emission effects caused by process equipment and control devices, if present, on indirect-fired process heaters?
  4. Identify the HAP's of interest resulting from input trace constituents such as chlorine and mercury.

  The Coordinating Committee requested the Process Heater Work Group to report back on these questions at future Coordinating Committee meetings.

- The Coordinating Committee provided guidance that the other Source Work Groups consider these questions in assessing and bringing forward other data.

- The Coordinating Committee concurred with the Incinerator Work Group's recommendation that: Combustion for the primary purpose of metals recovery would be regulated under section 112, pursuant to its exemption under section 129; the Work Group will do no further work of secondary lead or secondary aluminum because these are covered by other MACT standards; and the Work Group will collect data on burn-off ovens, which would be covered under section 129.

- The Coordinating Committee concurred with the Incinerator Work Group's recommendation that Work Groups will focus on data collection for HAP's from

halogenated gases under section 112, while non-halogenated gases will be low priority.

- The Coordinating Committee encouraged Source Work Groups to identify and prioritize their activities and communicate these priorities and supporting rationale to the Committee.

- The Coordinating Committee directed that the Reciprocating IC Engines (RICE) Work Group continue working on the other portions of the test plan for the RICE proposed list of pollutants. However, the Committee did not reach consensus on a complete list of pollutants. Individual members suggested the Work Group consider dioxin, mercury, and criteria pollutants, and that ICCR participants be given an opportunity to make suggestions to the Work Group. The HAP list and test plan issues should be revisited at a future meeting.

- The Coordinating Committee asked the Testing and Monitoring Protocol Work Group to produce a White Paper on the products of incomplete combustion.

14.0 DISCUSSION OF NEXT MEETINGS

The Coordinating Committee schedule of upcoming meetings will be retained as follows:

- September 16 and 17: meeting in Research Triangle Park, North Carolina; and

- November 18 and 19: meeting in Houston, Texas.

These minutes represent an accurate description of matters discussed and conclusions reached and include a copy of all reports received, issued, or approved at the July 22 and 23, 1997, meeting of the ICCR Coordinating Committee. Fred Porter.

ADDENDUM 9/25/97

Gentlemen --

I apologize for the lateness of this comment but I did not read the draft minutes of the July ICCR CC meeting until on the airplane on my way to the September meeting. I did not feel that this issue was significant enough to disrupt those proceedings. However, I believe that there is a technically misleading statement in the July minutes which should be clarified.

I would refer you to the ERG draft meeting minutes, document cc22j171.wp6, page 29. This is in section 11.2, "Discussion and Public Comment (on the RICE WG presentation)": "Another Committee member noted that engine operating rates may also prove to be important. More NOx emissions are present when an engine operates at 80 percent load than at 100 percent." While I would agree with the first sentence, the second sentence is very misleading.

Diesel engines commonly show an increase in brake specific (e.g., g/bhp-hr units) NOx emission level -- at least initially -- as engine loading is decreased at a constant speed. So, at 80% load, a diesel engine may, indeed, have a higher brake specific NOx emission rate than at 100% load. Many Coordinating Committee members may be familiar with diesel engine operation resulting in the quoted statement. Note that at some point this trend reverses as temperatures decrease an at some reduced load level the brake specific emission rate will decrease below the level at 100% load. For gas fueled, spark ignited engines, however, it is Waukesha's experience that the reverse is at least equally likely to occur, i.e., brake specific NOx emissions decrease as load is decreased below 100%.

In addition, a second effect is occurring simultaneously--even with diesel engines--with the change in brake specific NO_X level as engine load is decreased from 100%. This is, the engine power measured in horsepower is decreasing. If the horsepower declines at a faster ate than the brake specific NO_X emission level increases the absolute NO_X emission rate (g/hr = g/bhp-hr x bhp) will be lower even though the brake specific emission rate is higher. Said another way, the absolute NO_X emission rate of an engine--measured in lb/hr, tons/year, or similar units--will depend on both its brake specific emission rate and its concurrent brake power level. Therefore, even if an engine's brake specific NOx emission rate increases with a load decrease, its absolute NO_X emission rate will still decline if the brake specific NO_X emission rate increase is proportionately less than the horsepower decrease.

The statement I quoted from the minutes professes an absolute. "More NO_X emissions are present when an engine operates at 80 percent load than at 100 percent." If it is apparent from my discussion, however, that a significant number, if not a majority, of all engines will show a decreased absolute NO_X emission rate at the 80% load level compared to the level at 100%. The statement is misleading at best if not in error for many engines, particularly gas fueled, spark ignited engines, and must be clarified to prevent misleading CC members and others reading the minutes.

Engine speed is another variable and affects NO_X formation rate as the time part of the well known "time-temperature" NO_X relationship. The quoted statement appears to imply a constant speed but this is not specifically stated. Depending on how "engine operating rates" or "load" or power is defined, engine speed--constant or not--can be crucial to any validity of the second sentence.

I suggest that this statement be clarified in the final version of the July minutes placed in the docket and on the TTN. If there is any question on my comments I would be happy to discuss the matter further.

Sincerely,

Robert Stachowicz
Waukesha Engine Division

ATTACHMENT 1

MEETING AGENDA

INDUSTRIAL COMBUSTION COORDINATED RULEMAKING
Coordinating Committee Meeting - July 22 and 23, 1997

The Renaissance Long Beach Hotel
111 East Ocean Boulevard, Long Beach, California

AGENDA

Note: "Business Casual" is acceptable attire for all Coordinating Committee and Work Group meetings

Major Meeting Goals:

- Discuss/Provide guidance on topics brought forward by Work Groups:

  Process Heaters: To inform the Committee of: (1) expected HAP emissions, and (2) preliminary MACT floor findings for indirect gaseous fuel fired process heaters.

  Incinerators: To obtain the committee's affirmation that: (1) combustion for the purpose of metals recovery would be regulated under section 112, pursuant to its exemption under section 129(g)(1); and (2) WG efforts will focus on control of HAPs from halogenated gases versus nonhalogenated gases under section 112.

  IC Engines: To inform the committee of the preliminary list of HAPs to be included in a future proposed test plan.

- Provide Coordinating Committee Direction Regarding Next Steps Regarding Solid Waste Definition

Tuesday, July 22

9:00 a.m. Welcome and Agenda Review

9:15 a.m. Update on TTN
Update on Information Collection Request
Update on Availability of Emissions Database
Update on Industrial and Commercial Waste Incinerator Rulemaking
Update on NOx NSPS Proposal

10:00 a.m. Public Comment and Opportunity for CC to Exchange Ideas with Public

10:15 a.m. BREAK

10:30 a.m.	Questions or Comments About Work Group Status Reports Posted to the TTN
11:00 a.m.	Public Comment and Opportunity for CC to Exchange Ideas with Public
11:15 a.m.	Report by Steve Gerritson on Economics Incentives FACA Questions and Discussion
11:45 a.m.	LUNCH
12:45 p.m.	Presentation by Process Heaters Work Group about PERF Data Facilitated Discussion of Issues: - petrochemical process gas and natural gas HAP emissions - impacts of NO_X controls - preliminary MACT floor for indirect gaseous-fuel fired process heaters
2:00 p.m	Public Comment and Opportunity for CC to Exchange Ideas with Public
2:30 p.m.	BREAK
2:45 p.m.	Continued Discussion of PERF Data Development of CC Guidance for Work Group
3:45 p.m.	Solid Waste Definition Subgroup Report Facilitated Discussion Public Comment and Opportunity for CC to Exchange Ideas with Public
4:45 p.m.	BREAK
5:00 p.m.	Further Discussion and CC Provide Direction About Desired Next Steps Regarding Definition of Solid Waste
5:30 p.m.	Results of Second CC Meeting Improvements Survey
5:35 p.m.	Review of Previous Parking Lot Issues and Those Identified During the Day's Discussion Agreement on Which, If Any, to Discuss Tomorrow
5:50 p.m.	Overview of Tomorrow's Agenda
6:00 p.m.	Adjourn

Wednesday, July 23

(There will be an optional tour of the Puente Hills Landfill beginning at 7:00 a.m. for those who have signed up in advance)

10:00 a.m.	Convene Agenda Review
10:10 a.m.	Presentation by Incinerator Work Group of Items Needing CC Guidance Facilitated CC Discussion Public Comment and Opportunity for CC to Exchange Ideas with Public Further Discussion and CC Provide Guidance to Work Group
12:00 p.m.	LUNCH
1:00 p.m.	Presentation by Engines Work Group About Testing Needs Facilitated CC Discussion Public Comment and Opportunity for CC to Exchange Ideas with Public CC Guidance to Work Group
2:15 p.m.	BREAK
2:30 p.m.	Presentation by ICCR Tracking Subgroup
3:15 p.m.	Discussion of Previously Selected Parking Lot Topics
3:55 p.m.	Proposed Items for Next Meeting Agenda
4:00 p.m.	Review and Agree to Bullet Summary
4:15 p.m.	Adjourn

Please note:

On Friday, July 25, the Gas Turbines Work Group will host a Combustion Turbines HAP Technology Workshop to which CC members, WG members, and the public are invited.

Materials posted on the TTN 1 week prior to the meeting will not be provided at the meeting. Please bring your own copies.

ATTACHMENT 2

ATTENDANCE LIST

ICCR Meeting Attendance List
July 22, 1997

Greg Adams
Amanda Agnew
Richard Anderson
Todd Barker
Lisa Beal
Bob Bessette
Andrew Bodnarik
Michael Brand
Atly Brasher
David Brooks
Mark Bryson
Mark Calmes
Craig Campbell
Frank Caponi
Peter Carroll
Stanley Carter
Roy Carwile
A. J. Cherian
Delbert Cline
Sam Clowney
Linda Coerr
Linda Cooper
Andy Counts
Richard Crume
Kim Davis

Barton Day
Donald Dowdall
Jim Eddinger
Paul Eisele
Charles Elder
Glenn England
Lydia Evans
John Fanning
Chuck Feerick
Bruno Ferraro
Michael Fisher
Dick Van Frank
Leslye Fraser
Gordon Gaetke
Steve Gerritson
Lee Gilmer
Bob Grant
Ted Guth
Keith Harley
Peter Hill
Tim Hunt
John Huyler
Alex Johnson
Jim Jordan
Greg Karras

ICCR Meeting Attendance List
July 22, 1997 (Continued)

Robert Kaufmann
Chuck Keffer
John Klein
Dennis Knisley
Tony Licata
Ruth Mahr
David Marrack
Bill Maxwell
Thomas McGrath
Ruth Mead
Farhana Mohamed
Dave Montgomery
Bob Morris
Norm Morrow
Russell Mosher
Elsie Munsell
Vick Newsom
John Ogle
Miriam Lev-On
Bill O'Sullivan
William Passie
John Paul
Janet Peargin
Bill Perdue
Fred Porter

Donald Price
Susan Radomski
Brahim Richani
Jeffrey Roop
Andrew Roth
Sims Roy
Jim Sane
Glenn Sappie
David Schanbacher
Marvin Schorr
Jim Seebold
Gunseli Shareef
Jeff Shumaker
George Smith
Jennifer Snyder
James Stumbar
Hal Taback
Karluss Thomas
Tom Tyler
Bob Welch
Ed Wheless
Bill Wiley
Jane Williams
James Wright
Cherif Youssef

ICCR Meeting Attendance List
July 22, 1997 (Continued)

ICCR Meeting Attendance List
July 23, 1997

Greg Adams
Amanda Agnew
Richard Anderson
Todd Barker
Lisa Beal
Bob Bessette
Andrew Bodnarik
Michael Brand
Atly Brasher
Mark Bryson
Mark Calmes
Craig Campbell
Frank Caponi
Peter Carroll
Stanley Carter
Roy Carwile
A. J. Cherian
Delbert Cline
Sam Clowney
Linda Coerr
Jan Connery
Linda Cooper
Andy Counts
Kim Davis
Donald Dowdall

Jim Eddinger
Paul Eisele
Charles Elder
Glenn England
Lydia Evans
John Fanning
Chuck Feerick
Bruno Ferraro
Michael Fisher
Dick Van Frank
Leslye Fraser
Gordon Gaetke
Steve Gerritson
Sam Gieryn
Lee Gilmer
Bob Grant
Ted Guth
Keith Harley
Wiliam Heater
Michael Hewett
Peter Hill
Tim Hunt
John Huyler
Alex Johnson
Jim Jordan

ICCR Meeting Attendance List
July 23, 1997 (Continued)

Robert Kaufmann
Chuck Keffer
John Klein
Dennis Knisley
Tony Licata
Kelvin Lu
Ruth Mahr
David Marrack
Jay Martin
Bill Maxwell
Jim McCarthy
Tom McGrath
Ruth Mead
Michael Milliet
Farhana Mohamed
Dave Montgomery
Bob Morris
Norm Morrow
Russell Mosher
Elsie Munsell
Vick Newsom
John Ogle
Miriam Lev-On
Bill O'Sullivan
Bob Palzer

William Passie
John Paul
Janet Peargin
Bill Perdue
Fred Porter
Donald Price
Susan Radomski
Brahim Richani
Pete Romzick
Jeffrey Roop
Andrew Roth
Sims Roy
Jim Sane
Glenn Sappie
David Schanbacher
Marvin Schorr
Jim Seebold
Gunseli Shareef
Jeff Shumaker
George Smith
Dave Smith
Jennifer Snyder
Oliver Stanley
James Stumbar
Hal Taback

ICCR Meeting Attendance List
July 23, 1997 (Continued)

Karluss Thomas
Tom Tyler
Edwin Weaver
Bob Welch
Ed Wheless
Bill Wiley
Jane Williams
Jeff Willis
James Wright

ATTACHMENT 3

NOMINATIONS/WITHDRAWALS

INDUSTRIAL COMBUSTION COORDINATED RULEMAKING

Work Group Membership Nominations

Boilers Work Group

- Kerry Kelly (Tenneco)
- Kimberly Davis (NC DEHNR)
- Prakasam Tata (District of Chicago)
- Michael Blumenthal (Scrap Tire Management Council)

Process Heaters Work Group

- None

Incinerators Work Group

- None

Internal Combustion Engines Work Group

- None

Gas Turbines Work Group

- Sam Gieryn (Wisconsin's Environmental Decade)

Economics Work Group

- None

Testing and Monitoring Protocol Work Group

- None

INDUSTRIAL COMBUSTION COORDINATED RULEMAKING

Work Group Membership Nominations - Alternates

Boilers Work Group

- Member: Vladimir Zaysteff — Alternate: Kimberly Davis
- Member: Miriam Lev-On — Alternate: Susan Loftus

Process Heaters Work Group

- None

Incinerators Work Group

- None

Internal Combustion Engines Work Group

- None

Gas Turbines Work Group

- Member: Adriane Borgias — Alternate: A. J. Cherian

Economics Work Group

- None

Testing and Monitoring Protocol Work Group

- None

INDUSTRIAL COMBUSTION COORDINATED RULEMAKING

Work Group Membership Withdrawals

Boilers Work Group

- John College (Dravo Lime)
- David Zenz (District of Chicago)

Process Heaters Work Group

- Susan Blevins (Texas NRCC)

Incinerators Work Group

- None

Internal Combustion Engines Work Group

- None

Gas Turbines Work Group

- John Cassidy

Economics Work Group

- None

Testing and Monitoring Protocol Work Group

- None

ATTACHMENT 4

TTN UPDATE OVERHEADS

This file is available electronically in an Adobe Acrobat format on the TTN. A hardcopy is also available in the project docket.

ATTACHMENT 5

WG STATUS REPORTS

STATUS REPORT
July 11, 1997
BOILER WORK GROUP

- Met as a work group, in person, on May 22 and June 19. The next scheduled meeting is July 24 after the next coordinating committee (CC) meeting in Long Beach, CA.

- The agenda for the May 22 work group meeting focused on a presentation of the PERF data and field test data on gas-fired boilers and process heaters; a discussion of issues associated with solid waste; the status of the State Regulation Ad Hoc group data collection efforts; guidance from the CC on reviewing the inventory database; a presentation by the Test Methods and Protocols Work Group on the list of HAP compounds that could be emitted from boilers and possible test methods for measuring them; and an overview of major vs area source designations, the subcategorization process, and definition of solid waste.

- The agenda for the June 19 work group meeting focused on a presentation summarizing changes and updates to the emissions database; the status of the ICR survey; and a discussion of the progress made on developing a definition for solid waste as it pertains to the ICCR standards. Most of the June 19 meeting was designated for subgroup discussions. At the May 22 meeting, the work group concurred with the subgroups recommendation that the majority of future Work Group meetings should be spent in subgroups

- The Work Group recommended, at the June 19 meeting, that the Coordinating Committee develop a definition of solid waste on a quicker timeline than has been indicated. The Work Group concurred that if no direction is provided from the Coordinating Committee, the Boiler Work Group should proceed with discussing the issue and developing a draft definition. The Waste Definition ad-hoc group which was formed to develop a recommended definition of nonhazardous solid waste will be disbanded if the Coordinating Committee forms a Waste Definition Ad Hoc Group for all Work Groups.

- The Work Group noted that revised sections of AP-42 dealing with combustion sources were being released by EPA. The Work Group recommended that Mr. Eddinger inform the EPA group developing AP-42 that the ICCR process had obtained additional data, and would be obtaining even more data from the ICR responses that could significantly revise the information in the sections. Some Work Group members suggested that it might be prudent for the AP-42 combustion sections to be delayed until the ICCR information can be incorporated. Jim Eddinger did inform the EPA group developing the AP-42 chapters on combustion of the data gathered in the ICCR project and additional information expected after the ICR survey responses are returned.

- The Work Group concurred to endorse the Process Heater Work Group's initiative that the presentation of the PERF data, given to the Boiler Work Group on May 22, be put on the Coordinating Committee agenda for the July meeting.

- The subgroups discussions focused on dividing the database into smaller sections for the purpose of review, preliminary ideas for sub-categorization, the availability of emissions test data and emissions studies.

- The fossil fuel subgroup discussed the progress in reviewing the inventory database. The fossil fuel portion of the database was split into groups by SIC codes and these groups were assigned to subgroup members. The Subgroup determined that SIC Code assigned to some sources as part of the database entry process have been somewhat arbitrary. Extra efforts will be needed for review of specific company facilities by reviewing the entire database rather than a single SIC Code. There are some obvious errors that can be used to remove some sources from the boiler inventory. Those obvious errors will be the primary focus of the review efforts for the majority of entries for which there is no direct knowledge. There are many fields with missing data. Some of these are important fields for further use in the process. The Subgroup agreed they would need to evaluate and decide how to handle these cases. A tentative goal was set for completion of an initial scan of the database assignments by the July meeting.

- The fossil fuel subgroup discussed the subject of subcategorization. One approach presented was based on fuel and firing types. After discussion about the types of subcategorization possible, the subgroup decided that the preliminary subcategories should be very general. Another approach suggested was based on non-fuel type subcategories. The subgroup will initially look at broad classifications of gas, liquid, and coal fuels when reviewing the database and will use this as an initial look at possible subcategories because boilers firing gaseous, liquid, and solid fuels would be designed and controlled differently. The Subgroup agreed that there are differing opinions on methods for subcategorization that will need to be further discussed. One approach to initial subcategories were established as follows based on fuel type and firing method:

  - Natural gas (includes field gas, conventional natural gas, LNG, propane,etc.)
  - Process gas
  - Distillate oil
  - Residual oil
  - Bituminous coal- mass fired
  - Bituminous coal- pulverized coal, dry bottom
  - Bituminous coal- pulverized coal, wet bottom
  - Bituminous coal- cyclone
  - Bituminous coal- fluidized bed
  - Subbituminous coal- pulverized coal, dry bottom
  - Subbituminous coal- pulverized coal, wet bottom
  - Anthracite coal- stoker
  - Anthracite coal- fluidized bed
  - Lignite- pulverized coal, dry bottom
  - Lignite- pulverized coal, wet bottom

- Lignite- fluidized bed

- The Non-fossil Fuel Subgroup members volunteered to review portions of the inventory database following the guidance for review agreed to by the Coordinating Committee. Non-fossil Subgroup members reviewed a draft on subcategorization which was intended to serve as a starting point for discussions. The draft focused on subcategorizing by fuel and equipment type. Subgroup members were generally supportive of the draft. The subgroup concurred that no size cut-off was warranted at this time.

- The wood subgroup concurred that review of the inventory database was not a useful activity at this time. The Subgroup concurred to wait on reviewing the database until the information in the ICR responses was incorporated. The Subgroup concurred that they could not start subcategorization without a reliable database or a definition of solid waste. The subgroup also discussed the solid waste definition and how it would affected wood-fired boilers. The Subgroup came up with a preliminary recommendation: that solid waste is a by-product with no commercial value, has limited energy content, is not used to provide steam or process heat, and cannot be recycled.

Prepared by: Jim Eddinger
EPA co-chair

Stationary Combustion Turbine Work Group
Status Report to the ICCR CC
July 22-23, 1997

I. Meetings and Teleconferences

Since the last status report was given on May 14, 1997, the Combustion Turbines Work Group (CTWG) met on May 22 for a one day meeting in Durham, NC, and by Teleconference for a two and a half hour meeting on June 24.

II. Status

MACT Information Collection/Database Enhancement Task Group- This task group is currently in the process of reviewing the gathered population information in the database for validity. Task group members are also reviewing the HAP emission source test reports for inclusion of operating parameters as well as validity of the gathered data in these test reports. Members are looking to provide additional information for known sites and representations, as well as manufacturers information, including turbine operating parameters, for inclusion in the population database.

The task group is in the process of "cleaning up" the CT Population Database. This includes identifying records which do not belong in the Stationary Combustion Turbine (CT) Database, extracting useful information from selected fields, and resolving data anomalies. All information updates and data handling procedures are being performed in accordance with the recommendations provided by the Coordinating Committee. In refining the gathered information, special care is being taken not to change or modify the gathered information in Version 2. All extracted and submitted information (from the fields within Version 2 and any submitted information by WG members, trade associations, and manufacturers) will be saved in separate tables with a reference code denoting the source of each set of information. The final (refined) database can then be developed by linking these tables with the Version 2 tables. This will provide a refined database with adequate documentation of the sources of any changes/modifications.

The activities completed on the database include determining non-turbine units, extracting unit information such as turbine make, model and fuel type from selected fields, and assigning SCCs for units with incomplete SCCs.

The following tasks have been identified as necessary in order to further refine the CT Population Database: convert "Turbine Size" to standard units (MW), assemble the 1992 Section 114 information into a mergeable format, obtain manufacturers' data for turbine makes and models, develop a "Short List of Fields/Desired Fields" tables, obtain additional information from other sources including work group members, AGA, API, INGAA, DOE, & DOD, and develop a "Final Population Database."

Additional turbine information was found in sources other than the ones used in the ICCR data gathering effort. This includes information gathered by WG members, DOD, DOE, and previous EPA efforts. The task group will review the gathered population information in the CT ICCR database with the information gathered in these sources and will add records as necessary. All records will be modified in accordance to the Coordinating Committee's recommendations.

Subcategory Analysis Task Group- The gathered information indicates that subcategorization may not be necessary for MACT floor determination. The MACT floor for existing sources appears to be "no control;" however, this presumption needs to be verified. Subcategorization may be necessary for MACT or going beyond the floor.

HAP Reduction Technology Task Group- This task group identified potential add-on technologies and operating practices which may reduce HAP emissions. Although the task group identified and drafted good operating practices for turbines, it appears that these practices may not be suitable as control options for regulatory standards.

This task group is planning to hold a technology session on July 25, 1997, in Long Beach, CA. The purpose of this meeting is to take a closer look at the factors/parameters that may influence the formation of HAPs which can be taken into account in turbine design. Also, add-on controls, operating and maintenance procedures that may influence HAP emissions will be discussed.

The task group is also considering holding a technology workshop on duct burners in September, 1997.

HAP vs. Criteria Pollutant Trade Off Task Group- Additional data are being sought to identify turbine factors (operational and design) which directly affect HAP emissions. An attempt is also being made to identify a "surrogate" pollutant in lieu of HAPs for testing and monitoring purposes. CO is one of the considerations.

Test Methods Monitoring and Testing Task Group- A short list of HAPs for which to test was prepared for natural gas-fired turbines. Similar lists will be developed for diesel and landfill gas-fired turbines. Applicable test methods will also be identified for these pollutants. Source testing is scheduled for the early part of the next fiscal year. A potential test protocol will dictate the use of 3 to 4 control units (e.g., CO combustors or duct burners) with inlet and outlet measurements, and will include testing for HAPs, UHC, and criteria pollutants.

ECONOMIC ANALYSIS WORK GROUP
STATUS REPORT
July 11, 1997

Accomplishments Since the Last Status Report

- Distributed small business questionnaire to Economic Analysis Work Group members to identify small business representation.

- Glenn Sappie was nominated to serve as the Economic Analysis Work Group stakeholder co-chair alternate.

Tasks and Activities the Work Group is Currently Focusing On

- Monitoring source group's activities.

Plans or Objectives of the Work Group Over the Next Two Months

- Provide guidance to the source groups on model plant development as needed.

- Continue to review EPA database to familiarize the Work Group with content and completeness.

Meeting Dates and Locations Over the Next Two Months

- The next meeting of the Economic Work Group is scheduled for August 19, 1997. It will be a teleconference call, and Tom Walton and Joe Mackell will fax an agenda and call-in number to group members prior to the meeting.

THE IC ENGINE WORK GROUP STATUS REPORT - July 14, 1997

Accomplishments since last meeting:

EMISSIONS SUBGROUP:
1. The Emissions Subgroup has continued to develop an emissions test plan for RICE and control devices that may reduce HAPs. The subgroup has developed lists of pollutants for the purpose of emissions testing. The pollutant lists for natural gas, diesel, digester gas, landfill gas, and propane fueled engines and the methodology used to develop the lists will be presented to the Coordinating Committee at the July meeting.

POPULATION SUBGROUP:
1. The internal combustion engine population subgroup is primarily focused on "cleaning" the database and developing verifiable data.

Current focus of task and activities for the work group:

EMISSIONS SUBGROUP:
1. The Emissions Subgroup is working on the test plan for emissions testing of reciprocating internal combustion engines (RICE) under ICCR. The components of the test plan include (1)lists of target pollutants for the purpose of emissions testing, (2) the test methods that will be used to quantify the concentrations present, (3) a test protocol to document the RICE operating parameters during the emissions test, (4) identification of the RICE and control devices that will be tested and (5) a prioritization of emissions testing.
2. With regards to the test protocol, the Emissions Subgroup is working to finalize the details of the protocol which will provide test data not previously found in available source test reports including data related to control devices that may reduce HAPs emissions.
3. With regards to the test methods, the Emissions Subgroup is working to identify the appropriate test methods to quantify the target pollutants. The Subgroup plans to ask the Testing & Monitoring Work Group for assistance in identifying the most appropriate methods.
4. The Emissions Subgroup has not yet begun work to identify the RICE that will be tested. The Subgroup also has not begun work on the methodology to prioritize emissions testing. Once the test plan is complete, the Emissions Subgroup will present the plan to the Coordinating Committee and request funding from EPA to support emissions testing for RICE under ICCR.

POPULATION SUBGROUP:
1. The database work also includes "extracting" information from several fields to accurately portray the "universe' of engines. The final database will be compared to other databases for accuracy or engine types and controls.

Plans and objectives for work group between July and September:

EMISSIONS SUBGROUP:
1. The Emissions Subgroup will continue to work on the test plan for emissions testing of reciprocating internal combustion engines (RICE) under ICCR. The Subgroup is planning to have a complete test plan in place by September 30, 1997.

POPULATION SUBGROUP:
The population subgroup is on schedule to provide MACT floor engine and control statistics by September 1997.

Meetings/conference calls between July and September meetings:

1. Two conference calls anticipated by both subgroups as they prepare information for the September presentations.
2. Anticipate one conference call involving the entire RICE WG.

ICCR INCINERATOR WORK GROUP MEETING
July 15, 1997; EPA's ERC Annex APTI Classroom
Research Triangle Park, North Carolina

Activities and Decisions

- The Work Group discussed and approved, with amendments, the draft presentation for the July 22 and 23 Coordinating Committee meeting presented by Norman Morrow.

- The Work Group discussed and approved, with amendments, the draft scoping report presented by Subteam 2.

- The Work Group discussed and approved, with amendments, the draft scoping report presented by Subteam 4.

- The Work Group nominated the following members to participate in a Solid Waste Definition Subgroup, should the Coordinating Committee decide to form one:

  - Jeff Shumaker of International Paper, representing the American Forest and Paper Association and the Council of Industrial Boiler Owners (a generator and burner of non-fossil materials as well as a possible representative of small business);

  - Dave Maddox of Stanley Furniture Company, representing the American Furniture Manufacturers Association (a generator and burner of non-fossil materials as well as a representative of small business);

  - Dick Van Frank of Van Frank Associates, representing the Amos W. Butler Chapter of the Audubon Society and the Save the Dunes Council (environmental interests); and

  - John Ramsey of the Kansas Department of Health and Environment, representing STAPPA/AlAPCO (State/local government), pending confirmation of his interest and availability by Norman Morrow.

  The Work Group also formed a support group to assist these nominees in representing the full breadth of the Incinerator Work Group. The following members

volunteered to be part of this support group: Ed Repa, Tom Tyler, Beth Berglund, Tony Licata, George Parris, Bill Perdue, and Wayne Elliott.

- Leslye Fraser of EPA provided an update on the ICWI litigation. The litigants have agreed to a revised ICWI schedule with the following milestones:

  - October of 1997: enter data from the ICCR survey into the ICCR database;

  - November of 1998: describe the regulatory options for ICWI (a “white paper”); and

  - November of 2000: promulgate the ICWI regulation.

- The Work Group subteams provided updates on their progress. In light of the revised ICWI deadlines, the subteams were encouraged to complete the following tasks on schedule: to determine coverage of incinerators under sections 129, 112, and 111; to identify data gaps; and to develop subcategory recommendations.

- In response to the guidance issued to the Work Groups, several members expressed concern about a perceived Coordinating Committee expectation for comprehensive database review. Work Group members suggested that review and quality assurance of the database should be performed only insofar as it supports regulatory development for the ICCR.

Meetings

- The Work Group reviewed the current 1997 meeting schedule:

  - July 22 and 23: Coordinating Committee meeting in Long Beach, California

  - July 23: Puente Hills Landfill tour, 7am-9am PDT

  - July 30: WG teleconference (919-541-4486), 11am - 2pm EDT

  - Sept 3: WG teleconference (919-541-4486), 11am - 4pm EDT

  - September 18: WG meeting to be held in Research Triangle Park, North Carolina (note: the Coordinating Committee will meet in Research Triangle Park on September 16 and 17)

- September 18 or 19: tour of Glaxo Wellcome incinerators

- November 20: WG meeting scheduled for Houston, Texas (note: the Coordinating Committee will meet in Houston on November 18 and 19)

Action Items

- ERG will report back to the Work Group on the inclusion of the emission database incinerators in the inventory database and the availability of a cross-reference between the databases.

- Each Work Group member is encouraged to review by the July 30 Work Group teleconference the database review guidance issued to the Work Group by the Coordinating Committee.

STATUS REPORT
July 11, 1997
PROCESS HEATERS WORK GROUP

- Two work group meetings have been held since the May Coordinating Committee meeting--a face-to-face meeting June 19 in Washington, D.C., and a teleconference meeting on July 11. The next scheduled meeting is July 24 in Long Beach.

- Consensus was reached on presenting the PERF data to the Coordinating Committee at the July meeting, with the support of the Boilers Source Work Group, with the understanding that the presentation be for the purpose of opening discussion with the Coordinating Committee and the other work groups. These discussions would be on the technical information presented regarding gaseous-fuel fired external combustion devices and their expected HAP emissions under a variety of operating conditions; the policy implications of the major findings; and the Process Heaters Source Work Group preliminary finding that, for gas-fired process heaters, the "MACT floor" is no "add-on" control. (See Status Report for May for additional information.) One member of the work group raised the concern that dioxin emissions were not among those sampled and that this is an issue that should also be discussed with the Coordinating Committee.

- The Work Group began the task of reviewing the data base.

Prepared by: Bill Maxwell
EPA co-chair

ATTACHMENT 6

SOLID WASTE DEF. SUBGROUP REPORT

INDUSTRIAL COMBUSTION COORDINATED RULEMAKING

WASTE DEFINITION SUBGROUP

RECOMMENDATIONS

The Waste Definition Subgroup was tasked with developing recommendations regarding the following five issues:

1. Should the Coordinating Committee proceed with developing a recommendation for the definition of the term, "solid waste" to be used in regulations developed under section 129?

2. Assuming the answer to question #1 is yes, how should the Committee proceed to compose the Subgroup in terms of:

    a. Number of members on the Subgroup?
    b. Composition of the Subgroup in terms of number of members from the Coordinating Committee, workgroups, outside parties?
    c. Composition of the Subgroup in terms of balance of stakeholder interests?

3. What should be the starting point for developing a recommended definition of solid waste?

4. What should the schedule be for completing the Subgroup's efforts?

5. How can stakeholders not actively involved in the ICCR contribute to the Subgroup's deliberations?

This memorandum presents recommendations from the Solid Waste Definition Subgroup on each of the above issues, which will be presented by the Subgroup at the July Coordinating Committee meeting.

1. Should the Coordinating Committee Proceed with Development of a Recommendation for a Definition of the Term, "Solid Waste," for Regulations Developed Under Section 129 of the Clean Air Act ?

The Waste Definition Subgroup reached consensus on this question and is recommending that the Coordinating Committee form a Solid Waste Definition Subgroup

("SWDS") to investigate the definition of nonhazardous solid waste for purposes of 129 regulatory development. This recommendation arises from the Subgroup's determination that a clear definition of "solid waste" is needed by the ICCR, so that the work groups (primarily the incinerator, boiler and process heater work groups) can understand and address which facilities will be considered for regulation under Section 112 versus regulation under Section 129. Existing definitions from RCRA may require clarification and/or modification in order to be useable for the ICCR. One particular area of concern with the current RCRA definitions for hazardous solid waste is the definition of "discarded" in 40 CFR 261.2.

2. <u>If the Coordinating Committee Proceeds with Development of a Definition, What Should be the Composition of the Subgroup?</u>

a. The Subgroup recommends that the Coordinating Committee establish a Solid Waste Definition Subgroup, preferably of 8 to 10 individuals, but no more than 12 individuals. These individuals should be selected predominately from the work groups and selected predominately from the three work groups most concerned with the definition of solid waste under section 129 (i.e., boilers, incinerators, and process heaters).

b. The number of individuals selected to serve on this Solid Waste Definition Subgroup should be selected from the work groups as follows:

> Boiler Work Group: 2 individuals
> Incinerator Work Group: 2 individuals
> Process Heater Work Group: 2 individuals
> Turbine/Engine Work Group: 1 individual*
> EPA: 1 individual
> At Large Selection (if appropriate): 1 - 2 individuals**

Notes:
* One individual selected to represent interests of turbine <u>and</u> engine work groups, if these work groups desire a representative on the subgroup.
** 1 - 2 individuals selected from the membership of the ICCR at large to ensure a "balance" of stakeholder interests, if appropriate

Attachment A contains a list of individuals nominated by the various source workgroups who are interested in being members of the SWDS to expedite the Coordinating Committee's consideration of this recommendation. The Subgroup believes that eight to ten individuals should be sufficient to represent all stakeholder interests and achieve an appropriate "balance" (see below) among stakeholder interests. If, however, the Coordinating Committee feels the "balance" could be improved with selection of

additional individuals, then the Subgroup recommends that the Committee select another one to two "at large" individuals from the membership of the ICCR, increasing the size of the Subgroup to a maximum of twelve individuals.

c. The individuals selected to serve on this Solid Waste Definition Subgroup should also be selected to achieve an overall "balance" of stakeholder interests similar to the following:

> Sources which burn solid waste and/or non-fossil fuel: 3 individuals
> Sources which generate solid waste and/or non-fossil fuel: 1 individual
> Small business interests: 1 individual
> Environmental interests: 2 individuals
> State/local air pollution control agencies: 1 individual
> EPA: 1 individual

3. <u>What should be the starting point for developing a recommended definition of solid waste?</u>

The mission of this Solid Waste Definition Subgroup should be as follows:

> To develop for the Coordinating Committee's consideration recommendations for a definition of the term, "solid waste," to be used in regulations developed under section 129 of the Clean Air Act. The "starting point" for development of this definition will be the statutory definition of the term, "solid waste," found in the Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act) [42 U.S.C. § 6903(27)], and the regulatory definition of the term, "solid waste," found in Part 260 of the Code of Federal Regulations [40 CFR § 261.2].

Although this is the starting point for the Subgroup's deliberations, the recommendations developed by the Solid Waste Definition Subgroup may differ significantly and substantially from the definition of the term solid waste in Part 260; however, differences from the definition of solid waste in Part 260 must be accompanied by an outline of the rationale why the difference is appropriate for regulations developed under section 129. Finally, the recommendations developed by the Subgroup must be consistent with the statutory definition of solid waste included in the Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act) and as "reasonably" consistent with the definition of solid waste found in Part 260. While "reasonably" consistent is a judgment; it is a judgment that the Subgroup is called upon to make and explain, as appropriate, in presenting their recommendations to the Coordinating Committee.

4. What should be the schedule by which the SWDS completes its mission?

This Solid Waste Definition Subgroup should complete its mission by the September meeting of the Coordinating Committee, if possible, and definitely by the November Coordinating Committee meeting. If it is not possible to complete its mission by the September meeting, the Subgroup should present a status report to the Coordinating Committee at the September meeting, outlining progress to date and any alternatives under discussion within the Subgroup, to provide the Coordinating Committee an opportunity for additional guidance, if appropriate.

5. How can stakeholders not involved actively in the ICCR contribute to the SWDS' efforts?

Finally, in response to specific suggestions submitted to the Solid Waste Definition Subgroup from members of the ICCR, the Subgroup should actively solicit and consider comments and concerns from stakeholders not directly represented in the ICCR during the development of their recommendations.

Respectfully submitted by ,

Members of the Waste Definition Subgroup

Fred Porter
Frank Ferraro (alternate to Jim Stumbar)
Alex Johnson
Jeff Shumaker (alternate to Norm Morrow)
Paul Eisele
John Ogle
Marvin Schorr
William O'Sullivan
Leslye Fraser (alternate to Fred Porter)

ATTACHMENT A

SOURCE WORKGROUP MEMBERS INTERESTED IN BEING MEMBERS OF THE SOLID WASTE DEFINITION SUBGROUP

Boilers (6)
Frank Ferraro
Mike Fisher
Mike Soots
David Cooper
Jim Stumbar
Jim Eddinger

Incinerators (9)
Dave Maddox
Jeff Shumaker
George Parris
Bill Perdue
Dick Van Frank
John Ramsey
Tom Tyler
David Marrack
Tony Licata

Process Heaters (5)
John Ogle
Chuck Feerick
Jane Williams
Bruno Ferraro
Lawrence Otwell

Engines/Turbines
Marvin Schorr
TBD

ATTACHMENT 7

BUDGET SUBGROUP REPORT

This file is available electronically in an Adobe Acrobat format on the TTN. A hardcopy is also available in the project docket.

ATTACHMENT 8

PERF PRESENTATION

This file is available electronically in an Adobe Acrobat format on the TTN. A hardcopy is also available in the project file.

ATTACHMENT 9

INFORMATION ON DIOXIN TESTS PROVIDED BY GREG KARRAS,
COMMUNITIES FOR A BETTER ENVIRONMENT

Confirmed emission of dioxins and dibenzofurans from oil refineries: examples from the San Francisco Bay Area

Emission tested	Approximate number of tests that detected dioxins	Refineries tested	Data source(s)
Refinery stormwater runoff	13 that exceeded a 0.14 pg/L concern level	Chevron, Exxon, Shell, Tosco (Rodeo), Tosco (Martinez)	S.F. Bay Regional Water Quality Control Board (February 1997) (Contact: Lila Tana/510-286-0911)
Treated process water discharge	17 that exceeded a 0.14 pg/L effluent limit	Tosco (Martinez), Tosco (Rodeo), Pacific Refining	Clean Water Act discharge monitoring reports (SFBRWQCB)
Reformer catalyst regen. - wash	13	Chevron, Tosco (Martinez), Tosco (Rodeo)	EPA (May 1994) Preliminary data summary for the Pet. Ref. Category Contact: Ron Kirby
Reformer catalyst regen. - stack	3	Tests in Canada	Thompson et al. (Chemosphere, 1990)
Fluid catalytic cracker - stack	2	Chevron	Cal. Air Resources Board 3/18/97 draft report (Contact: Bill Loscuttoff)
Boiler - stack	2	Shell	6/11/97 response to public records request from Bay Area Air Quality Mgt. District (Contact: Brian Bateman)

CBE July 1, 1997

Dioxin still reaches the Bay

despite use of "end of pipe" treatment: In these 54 samples of waste water and storm water runoff discharges to S.F. Bay, dioxin toxicity equivalents (TEQ) exceed the 0.14 picogram-per-liter limit on some discharges.

Waste water discharge	-date	TEQ in pg/L	Storm water discharge	-date	TEQ in pg/L
Tosco refinery	-3/29/91	2.5 pg/L	Sunnyvale E. Channel	-12/12/95	11 pg/L
Tosco refinery	-3/29/91	0.56 pg/L	Sunnyvale E. Channel	-4\1\96	1.1 pg/L
Tosco refinery	-7/31/92	0.97 pg/L	Guadalupe River	-12\14\95	15 pg/L
Tosco refinery	-11/19/23	4.57 pg/L	Guadalupe River	-4\1\96	4.1 pg/L
Tosco refinery	-1/6/94	4.38 pg/L	Guadalupe River	-4\1\96	4.0 pg/L
Tosco refinery	-12/14/95	2.78 pg/L	Castro Valley Creek	-1\16\96	11 pg/L
Tosco refinery	-2/14/96	0.69 pg/L	Castro Valley Creek	-1\16\96	10 pg/L
Tosco refinery	-1/17/96	1.1 pg/L	Castro Valley Creek	-4\1\96	26 pg/L
Tosco refinery	-3/13/96	0.62 pg/L	Rheem Creek	-12\11\95	14 pg/L
Tosco refinery	-3/13/96	0.56 pg/L	Rheem Creek	-4\1\96	11 pg/L
Tosco refinery	-4/11/96	0.55 pg/L	Walnut Creek	-12\13\95	6.1 pg/L
Tosco refinery	-4/11/96	0.55 pg/L	Walnut Creek	-4\19\6	5.1 pg/L
Tosco refinery	-5/31/96	0.16 pg/L	Laurel Creek	-12\11\95	0.64 pg/L
Unocal refinery	-9/19/90	6.42 pg/L	Laurel Creek	-12\11\95	0.68 pg/L
Unocal refinery	-2/28/91	2.13 pg/L	Chevron ref. runoff	-12\12\95	8.3 pg/L
Unocal refinery	-3/1/91	0.62 pg/L	Unocal ref. runoff	-12\11\95	68 pg/L
Pacific refinery	-12/10/96	0.61 pg/L	Unocal ref. runoff	-2\15\96	3 pg/L
San Francisco sewage treatment plant	-3/19/95	0.51 pg/L	Shell refinery runoff	-12\11\95	1.1 pg/L
San Jose/S.C. STP	-9/19/92	2.32 pg/L	Shell refinery runoff	-12\11\95	60 pg/L
San Jose/S.C. STP	-10/19/92	0.21 pg/L	Shell refinery runoff	-12\11\95	0.77 pg/L
Sunnyvale STP	-2/11/93	0.61 pg/L	Shell refinery runoff	-2\15\96	56 pg/L
Union San. Dist. STP	-8/1/94	0.28 pg/L	Tosco refinery runoff	-12\11\95	2.6 pg/L
West County Agency (WCA) Richmond STP	-9/29/2	0.18 pg/L	Tosco refinery runoff	-2\21\96	2.9 pg/L
WCA Richmond STP	-10/8/92	0.36 pg/L	Tosco refinery runoff	-2\21\96	5.8 pg/L
WCA West Contra Costa San. District	-9/22/92	2.55 pg/L	Tosco refinery runoff	-2\21\96	0.47 pg/L
W.C.A. comb. effluent	-9/18/92	0.29 pg/L	Exxon refinery runoff	-12\11\95	9.9 pg/L
W.C.A. comb. effluent	-10/8/92	0.25 pg/L	Exxon refinery runoff	-2\15\96	0.74 pg/L

From discharger self-monitoring reports and a February, 1997 RWQCB runoff survey report.

Communities for a Better Environment - CBE

Sources: Discharger self monitoring reports to the Regional Water Board, and a Regional Board runoff survey released in February, 1997.

ATTACHMENT 10

INCINERATOR WG PRESENTATION

Incinerator Work Group Presentation
July Coordinating Committee
Presented by N. L. Morrow

Introduction

Like most of the ICCR Work Groups, the incinerator Work Group (IWG) has been evaluating available information for the purpose of establishing which groups of sources should be the focus of attention. While our understanding of the entire incinerator category is incomplete, we have reached agreement on two groups and are asking for concurrence of the Coordinating Committee (CC) with those conclusions. Other groups of incinerators continue to be evaluated and recommendations relative to them will be brought forward to future CC meetings.

Scope

The IWG is considering all sources which are not boilers, process heaters, turbines, or internal combustion engines. Efforts continue to specifically identify the boundaries between incinerators, boilers and process heaters, but a complete understanding of those boundaries at this time is unnecessary for identifying groups of sources that should or should not be a focus of IWG attention.

To address the broad range of incinerators within the IWG scope, we have established five subteams. These teams are:

Subteam 1	Pathological; Crematory; Pharmaceutical
Subteam 2	Petroleum; Chemicals; Off-gas; Industrial Sludge; Soils
Subteam 3	Wood, including pulp & paper; Wood products; Ovens
Subteam 4	Metals; Rubber; Burnoff Incinerators (e.g. steel, glass)
Subteam 5	Small MWC; Landfill Gas Flares; Fiberglass; Agricultural; Concrete; other

In addition, the IWG has been working to better define which incinerators would be subject to Section 129 rulemaking, since this decision is inextricably tied to the prioritization decision. The IWG believes that sources which are ultimately concluded to be subject to Section 129 must be addressed via rule development and thus will be a focus of Work Group effort.

Prioritization Process

While the "incinerator" category contains fewer sources than boilers or process heaters, the wide diversity of incinerator types, section 129 applicability to all size devices and the lack of readily available information makes meeting the ICCR schedule, with defensible and well done regulations, a major challenge. In order to assure that those incinerators which must be addressed because of the requirements of the Clean Air Act and those which should be addressed to achieve the maximum benefit, prioritization is critical. In distinguishing which incinerator types should be given priority attention, the IWG asks the following questions:

1. Is this incinerator type subject to Section 129?
2. Does it include significant,[1] unregulated combustion sources of HAP, thereby justifying development of a Section 112 standard?
3. Does it include significant, unregulated combustion sources of criteria pollutants, thereby justifying development of a Section 111 standard?

The IWG believes equipment types for which the answer to all three questions is "no" should not be a focus of attention by the Work Group. Implicit in the second and third questions is the assumption that combustion sources which have already been addressed by Section 111 and 112 rulemakings or which the IWG believes are being adequately addressed in other rulemaking efforts should not be considered within the IWG scope. A combustion source is considered to have been or is being adequately addressed if combustion emissions were or will be specifically considered in development of another section 111 or 112 rule. Additionally, if we believe a type of incinerator would be better addressed in a non-ICCR rulemaking effort, we intend to communicate that recommendation to the CC and to EPA.

July CC Presentation

IWG Subteams 2 and 4 have developed prioritization recommendations for two incinerator groupings. The IWG concurs with the subteam positions and requests agreement from the CC with those recommendations. Prioritization is critical to progress and it is import that a decision be made so the IWG can focus its efforts and move forward.

[1] The working definition of "significant" will be determined by the Work Group.

Incinerator Work Group (IWG)
Subteam 2: Chemicals, Petroleum, Off-gas, Soil Incineration
Presented by Anthony Licata

Recommendation:

Criteria pollutant and HAP emissions from combustion of non-halogenated industrial gas should not be a focus of IWG efforts. Collection of HAP emission data from halogenated (fluorine-, chlorine-, bromine- or iodine- containing) gas combustion will be the focus of IWG efforts on industrial gas combustion.

Background

Off-gas from food, petroleum, chemical, pharmaceutical, pulp and paper and other industrial process operations are sometimes incinerated in flares or "off-gas" combustion devices such as "thermal oxidizers", "fume incinerators" and "afterburners". The ICCR database includes approximately 2200 flares and 1400 off-gas combustion devices. Table 1 provides a rough break down of the number of gas incineration devices in the ICCR database by type. Landfill gas flares are included in Table 1 for information, but are not considered “industrial” for the purposes of this recommendation. They are being addressed separately by Subteam 5.

Table 1
Off-gas Combustion Devices in Incinerator Database

Category	Flares		Off-gas Incinerators	
	Count	Percent	Count	Percent
Natural Gas	1419	65	1117	78
Process Gas - Petroleum	356	16	64	5
Process Gas - Other	101	4	243	17
Landfill Gas	153	7	0	
Other Gas	170	8	0	
Total	2199	100	1424	100

Industrial gas combustors are generally used to control emissions (normal and emergency) of hydrocarbons from process industries. With adequate combustion temperature, residence time and mixing, hydrocarbons are oxidized to carbon dioxide and water vapor. When used properly, total organic compound destruction will equal or exceed 98% (see references in Table 2). As a result, use of these devices is a common alternative in hydrocarbon control regulations. In general, these regulations, specify operating conditions and monitoring to assure the high level of destruction of which these devices are capable is achieved and, via Title V and the Compliance Assurance Monitoring rule, any monitoring gaps are being filled.

Table 2
Selected Flare Destruction Efficiency References

Reference 1	"Flare Efficiency Study," U.S. EPA, U.S. EPA, EPA-600/2-83-052, July 1983
Reference 2	"Evaluation of the Efficiency of Flares: Test Results," U.S. EPA, EPA-600/2-84-095, May 1984
Reference 3	"Air Pollution Engineering Manual," Air and Waste Management Association, 1992

Section 129

Section 129 applies to "solid waste" combustion. Since solid waste is defined to exclude gases (except gases which are in a container), Section 129 does not apply to industrial gas combustors.

Section 112

The combustion of non-halogenated gases generates very little HAP, as discussed in the Process Heater Work Group presentation of the PERF data. If the BTU content of a gas is consistent and high and the volume is significant, the gas will be combusted in a boiler, process heater, turbine or internal combustion engine because the recoverable energy is too valuable to lose by incinerating the gas. Thus, on an annual average basis, industrial flares and off-gas combustion devices are generally used for intermittent (e.g. emergency) situations or as control devices for low volume or low heating value (hydrocarbon content) streams. As a result, combustion by-product HAP production from these devices is small. As indicated by other Work Groups, even combustion of gaseous hydrocarbons as fuel in non-incinerator devices does not generate major source quantities of HAP. Thus, the subteam and the IWG believe that industrial non-halogenated off-gas combustion is not a significant source of combustion HAP and that halogenated gas combustion should be the focus of IWG efforts on this type of device.

Section 111

As discussed in the Section 112 paragraph only smaller gas sources are combusted in flares or off-gas incinerators for economic reasons. Further, many classes of flares and off-gas incinerators are regulated or have been considered for regulation. Thus, criteria pollutant generation is not believed to be significant and would not justify attention from the IWG.

Conclusion

The IWG and Subteam 2 believe that criteria pollutant emissions and HAP emissions, if any, from the combustion of non-halogenated gas are of less concern than other incinerator emissions and therefore IWG data collection effort relative to industrial gas combustion will focus on HAP emissions from halogenated gas combustion.

Incinerator Work Group (IWG)
Subteam 4: Metals-, Rubber-, Glass-related Incineration
Presented by Andrew Roth

Description of Combustion Devices:

Metals-, rubber-, and glass-related incinerators are conceptual scoping terms used to encompass a wide variety of combustion devices. Subteam 4 has determined that most rubber- or glass-related combustion devices that were originally termed "incinerators" are in actuality boilers or glass melting furnaces, because they combust wastes with the primary purpose of producing steam or process heat.

Metals-related incinerators can be further categorized as burnoff units or materials recovery units. Materials recovery units are devices such as secondary smelters, precious metal recovery units, and scrap metal recovery units. These units combust waste in the process of recovering secondary metals; recovering metals is their primary purpose.

Burnoff units are used for **recovery of metal parts such as armatures, racks, and drums** by burning off either a combustible coating or residue (e.g. paint, PVC, degreaser sludge in drums) or any attached combustible pieces (e.g. rubber grommets, plastic inserts). The recovered metal parts are distinct from the metals produced by materials recovery units in that the metal parts retain value in their current form above the value of their metal content. Many of the burnoff units are batch-fed, natural gas-fired, and are equipped with secondary combustion chambers. The batch burnoff units usually are not equipped with any type of add-on air pollution control device such as a scrubber or a baghouse.

Scoping Recommendations:

As part of the Incinerator Work Group (IWG) of the ICCR, Subteam 4 intends to restrict its scope to incinerators, that is, combustion devices that are not boilers or process heaters as defined by the ICCR. As mentioned previously in this presentation, rubber- and glass-related combustion devices listed in the ICCR database were found to be either boilers or process heaters. Subteam 4 would be pleased to help the appropriate Work Groups identify these boilers and process heaters in the ICCR database, if requested.

Three sections of the Clean Air Act (Act) provide the regulatory framework for developing regulations for the Subteam 4 portion of the ICCR IWG charge: section 129, section 112, and section 111. This scoping document presents recommendations for metals-related incinerators under sections 129 and 112.

Section 129:

Section 129 of the Act applies to solid waste combustion. Subteam 4 believes that the combustible materials that are fed to metals-related incinerators can be classified as solid wastes and that many metals-related incinerators may be appropriately regulated under section 129.

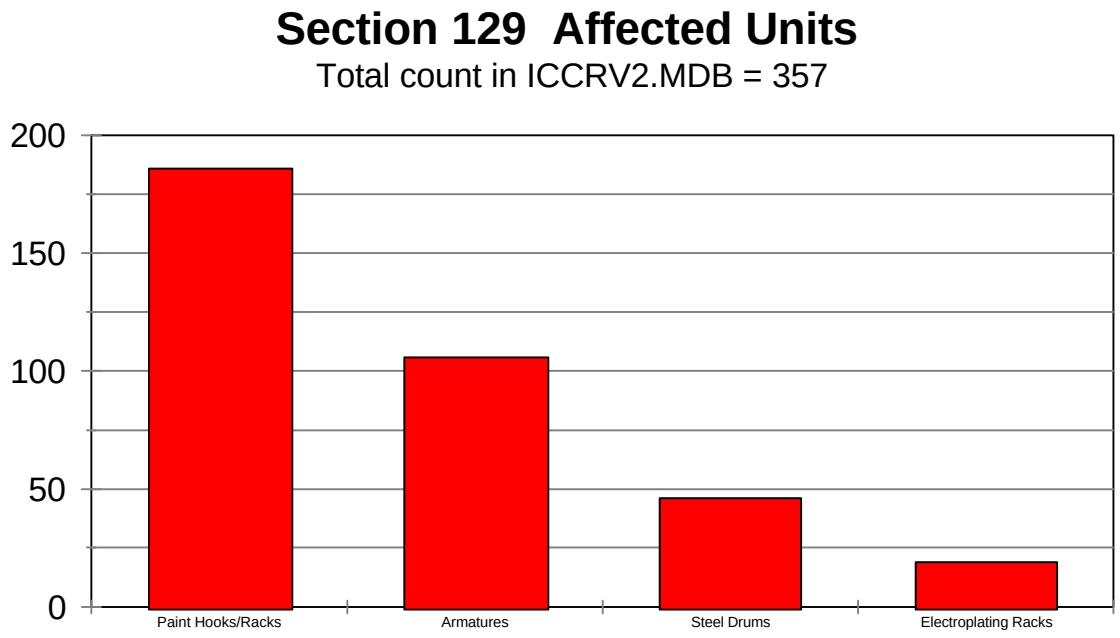
Section 129(g)(1) of the Act contains a number of explicit exclusions from the definition of Solid Waste Incineration Unit and reads, in part, "**...The term 'solid waste incineration unit' does not include (A) materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals,** (B)..." [bolding added] 42 U.S.C.A. §7429(g)(1) Subteam 4 understands this to mean that if the primary purpose of feeding the material or item into the combustion unit is for recovery of its metal content, rather than for recovery in its current form or use, such combustion units are excluded from section 129.

Subteam 4 recommends that burnoff units, but not materials recovery units, be regulated under section 129. As discussed above, burnoff units are used for recovery of metal parts that have value above that of their metal content alone.

EPA is required under section 129 to regulate the following pollutants: particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, lead, mercury, cadmium, hydrogen chloride, and dioxins/furans. The constituents that may be present in the combustible materials fed to burnoff units include chlorine and various metals. Subteam 4 believes that emissions of some or all of the section 129 pollutants are likely to occur. Very little emissions data are believed to exist for burnoff units with the exception of total particulate matter. Therefore Subteam 4 intends to gather emissions data and develop a test plan for section 129 pollutants for burnoff units including armature burnoff units, paint hook/rack burnoff units, electroplating rack burnoff units, and steel drum burnout units.

This graph accounts for 357 of the 643 metals-related combustion units identified in the ICCRV2.MDB database.

Section 112:



This section of the Act dealing with MACT standards is the next area of focus for the materials recovery units that are excluded from section 129. The vast majority by weight of the materials recovered in these type of units are represented by four metals types: aluminum, copper, ferrous, and lead. Some of the source categories involved with recovery of those metals have been recognized as significant sources of HAPs. Summarized below is the MACT regulatory status for materials recovery units:

- Secondary aluminum MACT - MACT under development. Early draft addresses emissions of PM, HCl, THC, dioxins/furans. Not clear whether for major HAP sources only.

- Secondary copper - Not listed as a MACT category. However, listed in the 1994 Dioxin Reassessment as a source of dioxins/furans. Source category may include scrap electric wire recovery units.

- Secondary ferrous metals - Not listed as a MACT category. However, suggested as a source of dioxins/furans in the 1994 Dioxin Reassessment.

- Secondary lead MACT - Promulgated May 31, 1994. Area source MACT addresses emissions of lead, HCl/Cl_2, THC for all secondary lead smelters.

Based on the information listed above, Subteam 4 recommends that no further work be done by the IWG on the secondary lead and secondary aluminum source categories. Subteam 4 intends to review EPA's work on the secondary copper, secondary ferrous, and secondary precious metal sources to date and, as needed, to gather and review emissions data for these source categories.

ATTACHMENT 11

RICE PRESENTATION

This file is available electronically in an Adobe Acrobat format on the TTN. A hardcopy is also available in the project docket.